

**SIEMENS**

# **MammoReport<sup>Plus</sup>**

**SP**

**System Manual**

## **Installation and Start-up Instructions**

**System Installation**

**© Siemens AG 2005**

The reproduction, transmission or use of this document or its contents is not permitted without express written authority. Offenders will be liable for damages. All rights, including rights created by patent grant or registration of a utility model or design, are reserved.

Register 3

Print No.: SPB7-420.814.20.02.02

English

Doc. Gen. Date: 06.05

Chapter	Page	Revision
All	All	02

## Document revision level

The document corresponds to the version/revision level effective at the time of system delivery. Revisions to hardcopy documentation are not automatically distributed.

Please contact your local Siemens office to order current revision levels.

## Disclaimer

The installation and service of equipment described herein is to be performed by qualified personnel who are employed by Siemens or one of its affiliates or who are otherwise authorized by Siemens or one of its affiliates to provide such services.

Assemblers and other persons who are not employed by or otherwise directly affiliated with or authorized by Siemens or one of its affiliates are directed to contact one of the local offices of Siemens or one of its affiliates before attempting installation or service procedures.

## Copyright notice

The DICOM functionalities in the MammoReportPlus system are based on the libraries from Merge Technologies Inc.

Celsius R610 is a trademark of Fujitsu Siemens Computers.

Windows XP Professional is a trademark of Microsoft Corporation.

SIMOMED SMM 21201P and syngo are trademarks of Siemens AG.

Symantec Ghost is a trademark of Symantec Corporation.

Coronis and MediCal Pro are trademarks of Barco.

Softcopy reading software by MeVis BreastCare,  
Copyright © 2001 - 2005 by MeVis BreastCare.



	Page
<b>1 General information</b>	<b>1-1</b>
Purpose of document . . . . .	1-1
Target group . . . . .	1-1
Training of customer support engineers . . . . .	1-1
Required documents . . . . .	1-1
Required tools, measurement and auxiliary devices . . . . .	1-1
Time required . . . . .	1-2
Safety information and protective measures . . . . .	1-2
Writing conventions . . . . .	1-2
Text emphasis . . . . .	1-2
Components included in delivery . . . . .	1-3
Acronyms and abbreviations . . . . .	1-4
<b>2 Systems overview</b>	<b>2-1</b>
Systems overview . . . . .	2-1
Room planning . . . . .	2-2
Sample room plan and movement ranges . . . . .	2-2
Weight specifications . . . . .	2-3
System connections/network . . . . .	2-4
Overview of system connections . . . . .	2-4
<b>3 Unpacking</b>	<b>3-1</b>
Check for completeness . . . . .	3-1
Unpacking and setup of the workstation . . . . .	3-1
Unpacking/transport . . . . .	3-1
Setup . . . . .	3-2
Laying and connecting the cables . . . . .	3-2
<b>4 Configuration Data Sheets</b>	<b>4-1</b>
DICOM conformance statements . . . . .	4-2
DICOM archive server / PACS . . . . .	4-2
DICOM printer (1) . . . . .	4-4
DICOM printer (2) . . . . .	4-4
System Settings . . . . .	4-5
Manufacturer Configuration . . . . .	4-6
Scanner LUT Configuration . . . . .	4-6
Read State Synchronization . . . . .	4-7
Routed modalities from syngo to SCR . . . . .	4-7
<b>5 Settings in Windows XP Professional</b>	<b>5-1</b>
Requirements . . . . .	5-1
System Requirements . . . . .	5-1
General Requirements . . . . .	5-1

	Page
Log in as Administrator in Windows XP . . . . .	5-1
Check Monitor Order CRT . . . . .	5-1
Check Monitor Order TFT . . . . .	5-3
Checking Drive Assignments . . . . .	5-3
Changing the Drive Letters (to be done only if D: and E: are interchanged) . . . . .	5-4
Drive "Med_System" (C:) . . . . .	5-4
Drive "Med_Data" (F:) for System Type <b>Basic</b> . . . . .	5-4
Drives "Med_Data" (F:) and "SCR_Data" (G:) for System Type <b>Option</b> . . . . .	5-4
Optional: Installation of Safety Package . . . . .	5-5
Install virus scanner. . . . .	5-5
Configure the safety options and settings . . . . .	5-6
Changing Language Settings. . . . .	5-9
Changing the Keyboard Driver . . . . .	5-10
Turning off Warnings . . . . .	5-12
Patient Orientation . . . . .	5-12
Manufacturer Configuration . . . . .	5-14
GE Processing . . . . .	5-15
Scanner LUT Configuration . . . . .	5-15
Read State Synchronization . . . . .	5-16
System Settings . . . . .	5-17
Increasing the mouse pointer . . . . .	5-17
Size of CAD Markers and Micro calcifications . . . . .	5-17
Routing of modalities from syngo to SCR . . . . .	5-18
Add DROC Images . . . . .	5-20

## **6** syngo Settings **6-1**

Requirements. . . . .	6-1
System Requirements . . . . .	6-1
General Requirements . . . . .	6-1
Settings. . . . .	6-1
syngo Service Software Interface. . . . .	6-2
System Options . . . . .	6-4
Local Host Settings . . . . .	6-5
TCP/IP LAN Settings . . . . .	6-7
General DICOM Settings . . . . .	6-8
Read Synchronization . . . . .	6-12
Defining Receiver. . . . .	6-13
Defining Sender. . . . .	6-14
DICOM Printing. . . . .	6-15
Active Auditing . . . . .	6-20
Finishing configuration and rebooting system . . . . .	6-21
Changing the AET Title. . . . .	6-21
Offline Devices . . . . .	6-22
Licensing . . . . .	6-22
System Management. . . . .	6-22

	Page
Changing the Keyboard Language . . . . .	6-23
Calibration of monitors . . . . .	6-24
Remote Service . . . . .	6-24
<b>7     SCR Service settings</b> . . . . .	<b>7-1</b>
General . . . . .	7-1
DICOM settings . . . . .	7-1
The Setup Tab . . . . .	7-2
The Printer tab . . . . .	7-3
Configuring DICOM Entities (MammoReportPlus system) . . . . .	7-4
Configuring MammoReportPlus . . . . .	7-4
Configuring a DICOM Printer . . . . .	7-4
Checking the Setup Configuration . . . . .	7-5
Editing entities . . . . .	7-6
Deleting entities . . . . .	7-6
Modifying Printer . . . . .	7-7
Adding Printer Type . . . . .	7-7
Viewing Printer Settings . . . . .	7-9
Editing a printer . . . . .	7-9
Deleting a printer . . . . .	7-10
Adding/Deleting Medium Sizes . . . . .	7-10
Licensing . . . . .	7-11
Service Patients . . . . .	7-12
Info . . . . .	7-14
<b>8     Customized System Settings</b> . . . . .	<b>8-1</b>
General . . . . .	8-1
System Settings . . . . .	8-1
Automatic Deletion . . . . .	8-3
Criteria for Automatic Deletion . . . . .	8-4
Consequences of Automatic Deletion . . . . .	8-5
Preventing Hard Disk Overflow . . . . .	8-5
Warning Level . . . . .	8-6
Critical Level . . . . .	8-6
Read State Synchronization . . . . .	8-7
<b>9     Recovery CD</b> . . . . .	<b>9-1</b>
General . . . . .	9-1
Save Customized Settings . . . . .	9-1
Step 1: Preparing the System for Recovery CD Creation . . . . .	9-1
Step 2: Running Ghost . . . . .	9-2
Step 3: Prepare the System after Recovery CD Creation . . . . .	9-3
Restore Recovery CD . . . . .	9-3
Step 1: Preparing the System for Restore of Recovery CD . . . . .	9-3
Step 2: Running Ghost . . . . .	9-4

	Page
Step 3: Prepare the System after Restore of Recovery CD . . . . .	9-5
<b>10      Backup And Restore</b>	<b>10-1</b>
Backup and Restore of the MBC Database . . . . .	10-1
Making a Backup . . . . .	10-1
Restoring a backup . . . . .	10-2
Backup/Restore on syngo level . . . . .	10-3
<b>11      Changes to previous version</b>	<b>11-1</b>
<b>A      Appendix</b>	<b>A-1</b>
Trouble Shooting for Languages . . . . .	A-1
Corrective Measures . . . . .	A-1

## Purpose of document

The purpose of *MammoReport<sup>Plus</sup> Installation and StartUp Instructions* is to provide instructions on how to install and configure the MammoReport<sup>Plus</sup> product.

## Target group

This manual is intended for customer support engineers.

### Training of customer support engineers

The instructions in this guide includes start-up procedures like network and printer settings, DICOM configuration, settings and monitor calibration.

Due to the technology used in this equipment, the setup, service and maintenance may only be performed by a customer support engineer with proper training in these fields.

## Required documents

- |   |                    |
|---|--------------------|
| • Operator Manual   | SPB7-420.620.20... |
| • Quality Control Manual  | SPB7-420.621.20... |
| • Wiring Diagram  | SPB7-420.844.20... |
| • Planning Guide  | SPB7-420.891.20... |
| • Quick Reference Guide, SMfit ACT, Automatic Calibration Tool, Release 3.2 or higher (included in monitor calibration tools, referred to as <i>Quick Reference Guide</i> ) |                    |
| • Instruction Manual, SMfit ACT, DIN6868-57, Plug-in (included in monitor calibration tools, referred to as <i>Instruction Manual</i> )                                     |                    |
| • Installation of Software VB10   | SPB7-420.812.21... |
| • MFGD 5621 HD - User Guide System Manual Coronis 5MP Mammo   |                    |
| • MediCal Pro Installation and User Guide   |                    |

## Required tools, measurement and auxiliary devices

### NOTE

All tools, measurement and auxiliary devices marked “ \* ” are listed along with their specifications in the STC (Service Tools Catalogue).

- Standard service equipment\*
- For database backups
  - at least 4 blank CD-Rs
- Monitor Calibration tools (for Siemens CRT and TFT), including:
  - SMfit ACT with Spotmeter
  - Quick Reference Guide
  - Instruction Manual
- Serial interface cable (Null Modem cable #99 00 440)

## Time required

The installation and configuration of the MammoReport<sup>Plus</sup> workstation requires approximately 4 hours for one CSE.

## Safety information and protective measures

The product specific safety information contained in this document, as well as the general safety information must be observed, see document Safety Information TD00-000.860.01...

**NOTICE**

---

**Be aware that this product is intended to be used in a non-patient environment.**

---

## Writing conventions

### Text emphasis

**WARNING**

---

**WARNING indicates a risk of danger that may lead to death or to serious physical injury.**

---

**CAUTION**

---

**CAUTION used with the safety alert symbol indicates a risk of danger that leads to slight or moderate physical injury and/or damage to property.**

---

**NOTICE**

---

**NOTICE used without the safety alert symbol indicates a risk of danger that, if disregarded, leads or may lead to a situation which could result in an undesirable outcome or state other than death, physical injury or damage to property.**

---

**NOTE**

---

**NOTE contains information provided with special emphasis to facilitate proper use of the equipment or proper execution of a procedure, i.e. hints, tips.**

---

## Components included in delivery

The delivery contains the following parts

Quantity	Article
2	High-resolution monitor
1	syngo monitor
1	Windows XP Professional operating system
1	MammoReport <sup>Plus</sup> software VB10
1	Workflow keypad
1	US/International syngo Keyboard (alternatively: Spanish, French, German, Swedish, Italian, Portuguese, Great Britain)
1	Mouse
4	Blank CD-R
1	Technical Manual
1	Operator Manual
1	Quality Control Manual
1	Manufacturer's documents for the high-resolution monitors

Tab. 1 Items included in package

## Acronyms and abbreviations

AE Title (AET)	DICOM Application Entity Title. Must be unique in a DICOM network
AWS	Acquisition Workstation
Conformance	Each manufacturer of a DICOM device has to provide such a statement which gives an overview of the products DICOM capability.
CSE	Customer Support Engineer
DICOM	Digital Imaging and Communication in Medicine
DHCP	Dynamic Host Configuration Protocol. Reduces the complexity of configuring computers for TCP/IP networks. The following TCP/IP configuration can be dynamically assigned by a DHCP server: IP Address, Subnet masks, gateway and additional parameters like domain name.
Dmax	The darkest area of an image that a device can reproduce and still have detail. A Dmax value of 4.0 would be considered perfect.
DNS	The Domain Name Service is used to resolve the TCP/IP address from a "user-friendly host name".
Hub	Distributor in a network using the star topology
IM	Port address of image management to query/retrieve images on a MagicStore PACS
IP Address	32-bit address assigned to hosts using TCP/IP. An IP address belongs to one of four classes (A, B, C, D) and is written as 4 pairs separated with periods (decimal point format). The IP is part of the socket address. Here IP means Internet Protocol.
LDB	Local Database
MG	DICOM object Mammography
Q/R	Query / Retrieve is a service class which provides the ability to retrieve/transfer a well-identified set of images.
Port	Part of the socket address. Different DICOM services on the same host PC may use different port numbers.
Subnet mask	The subnet mask is used to extract network and sub network information from the IP address.
Router	A device that connects different networks. In a TCP/IP environment a router is used to connect computers that are located in different IP address ranges.
Service Class	A structured description of a service which is supported by cooperating DIOM Application Entities, e.g. Storage Service Class.
SCP	Service Class Provider, e.g. a Storage Service Class Provider provides the capability to receive DICOM images from a DICOM AET Storage SCU.
SCU	Service Class User, e.g. a DICOM Storage Service Class User can send an image to a DICOM Service Class Provider.
SMPTE	Society of Motion Picture and Television Engineers
TCP	Transfer Control Protocol
UI	User Interface
USC	Uptime Service Center
WINS	WINS provides a distributed database for registration and querying dynamic Net-BIOS names to IP addresses.

## Systems overview

The MammoReport<sup>Plus</sup> system's major parts are:

- Two high-resolution monitors (CRT or TFT)
- FSC Celsius R610
- Workflow keypad
- syngo monitor
- MammoReport<sup>Plus</sup> software VB10
- Windows XP compatible printer, provided by the customer

**NOTE**

For identification detailed specific color information is labeled on every TFT Monitor.

**NOTICE**

If no printer is available, the customer will not be able to print reports.

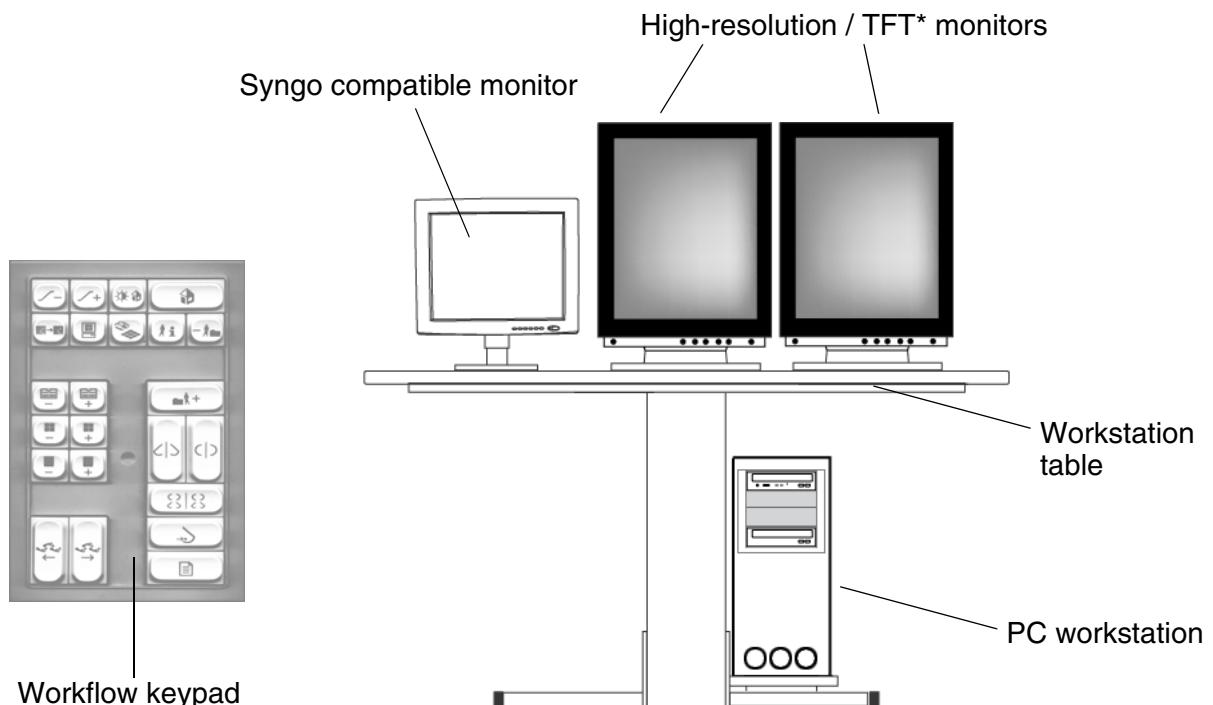


Fig. 1 Systems overview.

Additional options to the MammoReport<sup>Plus</sup> system are:

- 1 x 147 GB hard disk
- Archive system (e.g. MagicView 300, MagicStore)

**NOTE**

The workstation station table is provided by the customer. The table must support weight according to weight specifications, see Tab. 1, Page 2 - 3.

## Room planning

### Sample room plan and movement ranges

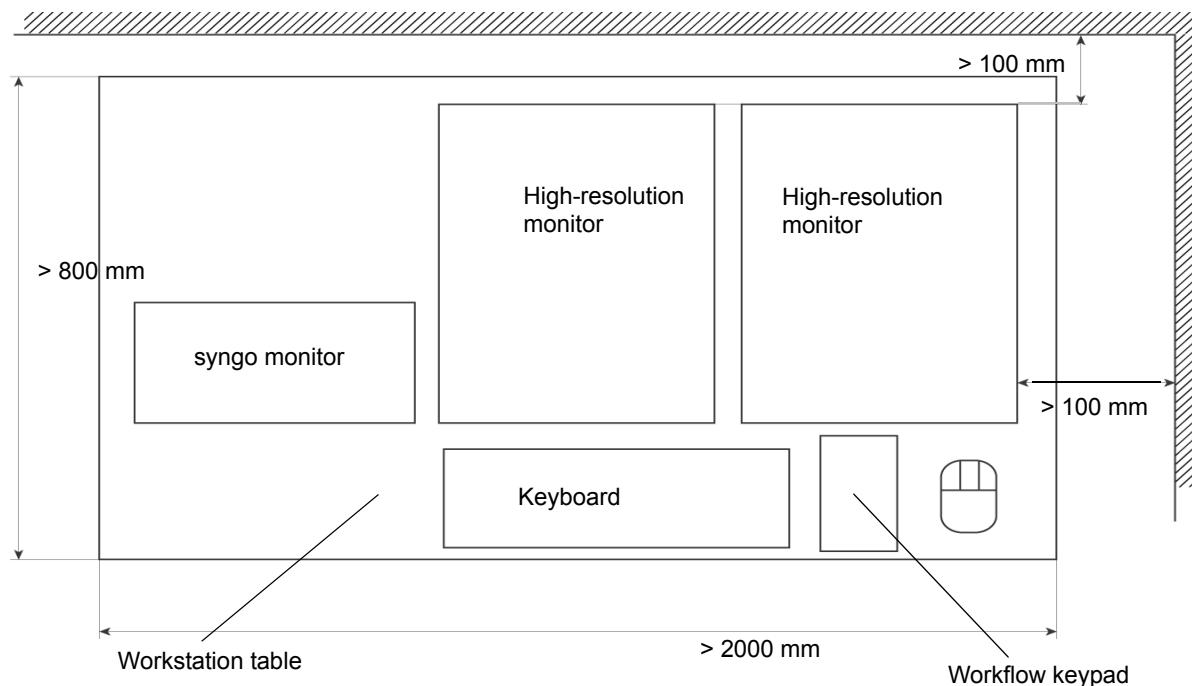


Fig. 2 Sample room plan.

This example places the FSC Celsius R610 underneath the workstation table. The room planning should also be prepared so that there are no power cables/transformers adjacent to the monitors. The monitors should also not be closer than 15 cm to other units.

**NOTE**

For cable lengths, see **MammoReport<sup>Plus</sup> Wiring diagram, SPB7-420.844.20...**.

**NOTE**

It is recommended that the **MammoReport<sup>Plus</sup>** is installed in a room separate from the acquisition system.

To comply with the requirements in DIN 6868-57 and to provide optimal viewing conditions for diagnosis, lighting conditions in the room around the MammoReport<sup>Plus</sup> need to fulfill certain conditions. This is especially important to ensure that viewing of the darkest gray-scale levels is not interfered with.

The MammoReport<sup>Plus</sup> monitors must be placed to avoid direct illumination and reflections on the monitors from light sources such as windows, lamps and light boxes. When viewing images on the MammoReport<sup>Plus</sup> the illumination should come from diffuse light sources and it is recommended that the ambient light level is below 10 cd/m<sup>2</sup>. The monitors should also be illuminated as evenly as possible from different directions.

## Weight specifications

The system will be delivered on two standard pallets, weighing approximately 130-140 kg. For components weights and dimensions see table below:

Component	Weight [kg]	Dimension (WxHxD) [mm]
FSC Celsius R610	25	205x451x603
syngo monitor	5.6 (Eizo) 10 (Siemens)	368x425x198 (Eizo) 464x430x240 (Siemens)
High-resolution monitor (CRT, SMM21201P)	2 x 33	403x580x520
(TFT, MFGD 5621HD)	2 x 13.5	408x592x217
(TFT, DSB 2103-D-5MP)	2 x 13.3	384x521x263

Tab. 1 Components weights and dimensions.

### CAUTION

**The high-resolution monitors are heavy.  
Always use two persons when handling the high-resolution monitors.**

### Table weight support

- The side table must be able to support a minimum weight of 5.6 kg to 10 kg resp. (the syngo monitor).

### CAUTION

**The specified weight supported for the tables is not valid if other equipment not belonging to the MammoReport system is placed on the tables.**

## System connections/network

### Overview of system connections

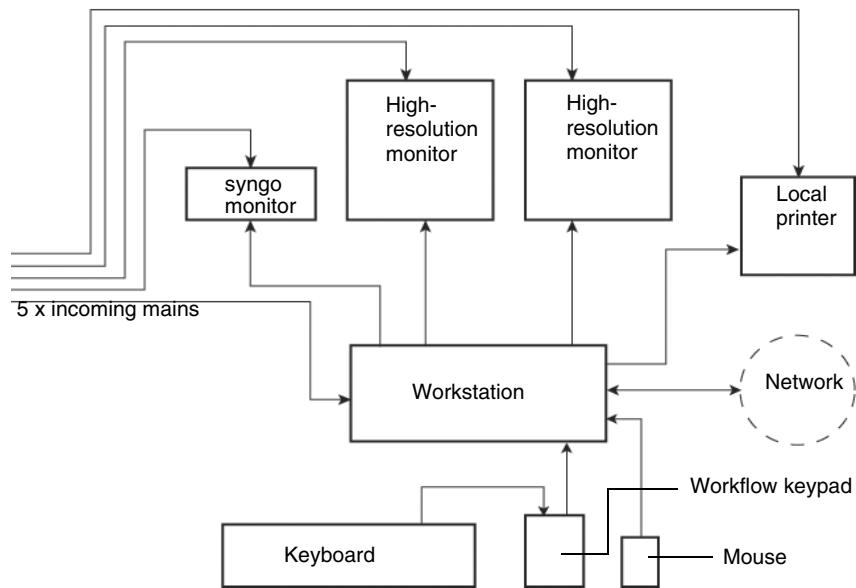


Fig. 3 Cable connections

**NOTE**

The MammoReport<sup>Plus</sup> system can be connected to line voltage 100-240 V.

## Check for completeness

Check the MammoReport<sup>Plus</sup> system for completeness according to the packing list.

## Unpacking and setup of the workstation

### Unpacking/transport

- Unpack accessories from the crate.
- Remove any protective film from the packaged items only at the installation site.
- All tables are provided by the customer.
- Move the workstation and accessories over the planned transport route using suitable transport devices to the installation site.
- Remove the protective film from the workstation.
- Unpack the monitors from the cartons.
- Move the monitors over the planned transport route using suitable transport devices to the installation site. Place the high-resolution monitors on the workstation table.
- Place the service monitor on the table.
- Place the computer on the shelf according to Fig. 1.

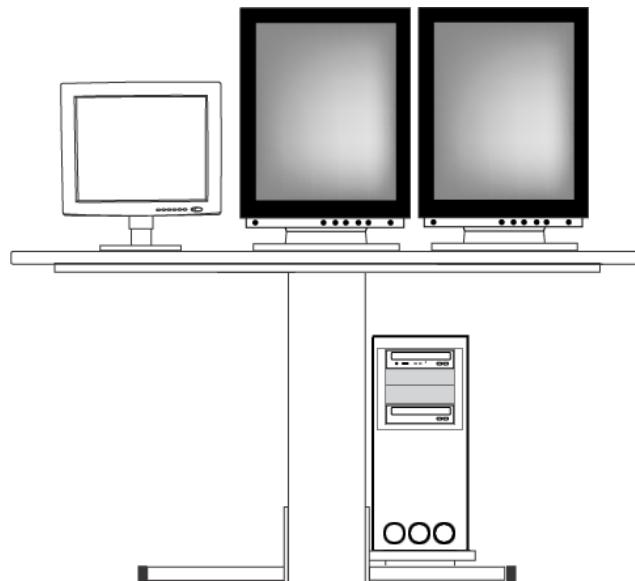


Fig. 1 Computer placement

### NOTE

Only valid for Siemens TFT monitors: For identification detailed specific color information is labeled on every TFT Monitor.

**Setup**

- Connect the computer, monitors, workflow keypad, keyboard and mouse according to MammoReportPlus Wiring Diagram, SPB7-420.844.20....

**Laying and connecting the cables**

Lay and connect the cables according to MammoReportPlus Wiring Diagram, SPB7-420.844.20.... and MammoReportPlus Planning Guide, SPB7-420.891.20.... .



**Risk of stumbling and damage to property.**

**Use cable ties or cable ducts to arrange the cables in an organized way along the floor or wall.**

## MammoReport<sup>Plus</sup> Workstation

### NOTICE

To assure an effective startup, it is necessary to FIRST summarize the configuration data in the following tables. The data can be obtained from the site administrator.

Parameter	Configuration	Remarks
Serial No. of the system		
Responsible USC telephone number		
Who is the responsible administrator for the customer's network	Name: Phone Number:	
Who is responsible for the physical network?	Name: Phone Number:	
Local Host (computer name)		Host name of the MammoReport <sup>Plus</sup> Workstation. Do not use more than 10 characters and no special characters
IP address Subnet mask		Host address and subnet mask
IP Gateway(s) address		IP addresses of the router
Own DICOM AE title:		The AET name must be unique in the network. Usually the AE title is set to the host name (upper case is recommended)
SCR port no.	50104	The port no. for SCR system must be fixed
SCR AE Title		The logical name of the network node <b>must</b> be SCR_SYNGO, the AE Titles should be different
syngo AET		
syngo port no.	5104	If syngo port number are changed, the changes listed in the NOTICE below need to be performed

Tab. 1 MammoReport Plus workstation data sheet

**NOTICE**

In case the syngo port number needs to be changed, perform the following changes:

- C:\syngo\config\merge\mergecom.pro change value of TCPIP\_LISTEN\_PORT
- registry:  
HKEY\_LOCAL\_MACHINE\SOFTWARE\Siemens\MedCom\Config\Site\ArchNet\_Common\tcpipListenPortNumber change decimal value
- in lightbox.ini: syngoPort, enter new value.

**DICOM conformance statements**

The necessary DICOM conformance statements must be available. Check the Interoperability Database for additional information:

URL:www-td.med.siemens.de. Collection: Product Information/DICOM.

Did you check the Interoperability Database?

Yes       No

Did you check the Conformance Statements?

Yes       No

**CAUTION**

Be careful when configuring target nodes for storage commitment. Make sure in the DICOM conformance statement of the node, that storage commitment is supported before configuring it.

**DICOM archive server / PACS**

Parameter	Configuration	Remarks
Location		
Archive manufacturer		
SW version		
Logical name		This is the name as it will appear in the DICOM Setup user interface
Host (Node) name		
IP address		Not necessary if a DNS or WINS name resolution is available
DICOM: General AET Port no.:		

Tab. 2 DICOM server data sheet

Parameter	Configuration	Remarks
Storage AET Port no.		If applicable
Query/Retrieve AET Port no.		If applicable
Query/Retrieve IM AET Port no.		If applicable
Verification Port no.		If applicable
Data model:		Patient root or study root

Tab. 2 DICOM server data sheet

## HIPAA and CAD server network nodes

Parameter	Configuration	Remarks
HIPAA: AET IP Address Port No.		
CAD Server: AET IP Address Port No.		

Tab. 3 HIPAA and CAD server data sheet (optional)

**DICOM printer (1)**

Parameter	Configuration	Remarks
Manufacturer		
Model		
Dmax		
Dmin		
Film size [pixels]	Portrait: Landscape:	
DICOM AET		
IP address		
Port no.		

**DICOM printer (2)**

Parameter	Configuration	Remarks
Manufacturer		
Model		
Dmax		
Dmin		
Film size [pixels]	Portrait: Landscape:	
DICOM AET		
IP address		
Port no.		

Tab. 4 DICOM printers data sheet

## System Settings

The system settings should be customized with a responsible administrator or radiologist.

Parameter	Default Setting	Check
<b>Scheduling</b>	On	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Off	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Reporting</b>	BI-RADS	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Closing a Case with Report	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Closing a Case	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Incoming Studies</b>	Screening	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Diagnostic	<input type="checkbox"/> Yes <input type="checkbox"/> No
	To be double read	<input type="checkbox"/> Yes <input type="checkbox"/> No
	To be double read	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Threshold</b>	Warning Level: .... %	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Critical Level: .... %	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Age of studies: .... days	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Delete not read studies	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Automatic Deletion</b>	On	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Off	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>IgnorePatientOrientation</b>	to be set only for manufacturer FUJI PHOTO FILM CO., LTD.	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Predefined Window/Level Values</b>	Window value (1): ....	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Level shift (1): ....	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Window value (2): ....	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Level shift (2): ....	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Double Reading</b>	Double blind	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Not blind	<input type="checkbox"/> Yes <input type="checkbox"/> No

Tab. 5 System settings

See also "Patient Orientation" on Page 5 - 12

### NOTICE

If Report Settings "BI-RADS" or "Closing a Case with reporting" are set, a paper printer driver needs to be installed to be able to print the reports. For this purpose reboot the system with shift key and install the printer driver as OS user "administrator".

## Manufacturer Configuration

(these settings are optional, to be configured in ManufacturerConfiguration.ini)

Manufacturer	Option	Check
	AcceptForProcessing	<input type="checkbox"/> Yes <input type="checkbox"/> No
	DisableLutHandling	<input type="checkbox"/> Yes <input type="checkbox"/> No
	AcceptForProcessing	<input type="checkbox"/> Yes <input type="checkbox"/> No
	DisableLutHandling	<input type="checkbox"/> Yes <input type="checkbox"/> No
	AcceptForProcessing	<input type="checkbox"/> Yes <input type="checkbox"/> No
	DisableLutHandling	<input type="checkbox"/> Yes <input type="checkbox"/> No
	AcceptForProcessing	<input type="checkbox"/> Yes <input type="checkbox"/> No
	DisableLutHandling	<input type="checkbox"/> Yes <input type="checkbox"/> No

Tab. 6 Manufacturer configuration data sheet

See also "Manufacturer Configuration" on Page 5 - 14

## Scanner LUT Configuration

(these settings are optional, to be configured in scanner.ini)

See also "Scanner LUT Configuration" on Page 5 - 15

Manufacturer	Parameter	Value
	LUT filename (mandatory))	
	Manufacturers model name	
	Software Version	
	DetectorID	
	SOPClassUID	
	Study Date	
	LUT filename (mandatory))	
	Manufacturers model name	
	Software Version	
	DetectorID	
	SOPClassUID	
	Study Date	

Tab. 7 Scanner LUT data sheet

## Read State Synchronization

(these settings are optional, to be configured in SyncConfiguration.ini)

See also "Read State Synchronization" on Page 5 - 16

Parameter	Value	Remarks
Timeout		value in seconds
IP Address 1		
Port No.		
Synctime		
Synctime 2		optional
Synctime 3		optional
IP Address 2		
Port No.		
Synctime		
Synctime 2		optional
Synctime 3		optional

Tab. 8 Read State Synchronization data sheet

## Routed modalities from syngo to SCR

see also "Routing of modalities from syngo to SCR" on Page 5 - 18.

Routed modalities	
-------------------	--

Tab. 9 Modalities routed from syngo to SCR

This page intentionally left blank.

## Requirements

### System Requirements

The system requirements are described in the document Planning Guide SPB7-420.891.20..." and in chapter 2, "Systems overview".

### General Requirements

- The PC must be operational and connected to the network.
- The MammoReport<sup>Plus</sup> dongle must be connected to the parallel port (D25 connector).
- All required data for configuration must be available, e.g. the checklists in chapter 4, "Configuration Data Sheets" must be fully completed.

### Log in as Administrator in Windows XP

1. Boot the computer
2. Press Shift key while booting is in progress.
3. Log in as user **Administrator** in Windows.

### Check Monitor Order CRT

This part shall only be performed for Type of Display System **CRT**.

1. **On syngo monitor** open **Display Properties** with right mouse click on Windows desktop ⇒ Properties.

2. Open tab **Settings** - the monitor order should be:

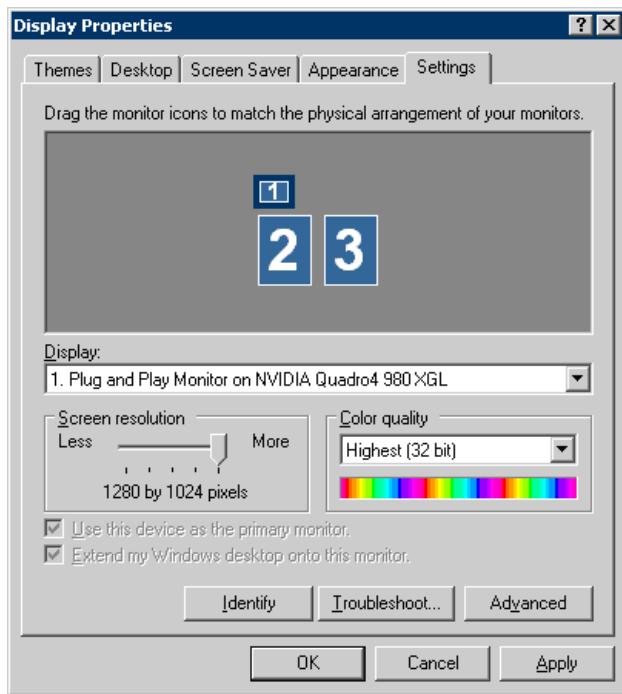


Fig. 1 Monitor Order after Image Restore

3. Hold left mouse button pressed and **move** the small **monitor 1** (this is the syngo monitor) to the position **left** from monitor 2 on the **bottom line**.
4. **Move monitor 2** in the same way to the right of monitor 3.
5. The correct monitor order is as shown below:

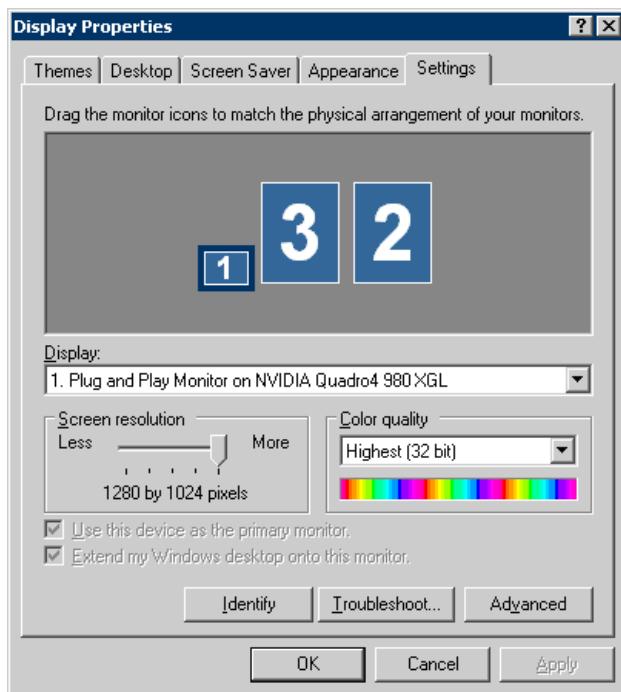


Fig. 2 Final Monitor Order

6. Click **OK** twice to leave the display properties, but do **not** restart the computer.

## Check Monitor Order TFT

This part should only be performed for Type of Display System **TFT**.

1. Click on Monitor 1 and move down to bottom line - the display order should be as shown in next figure.

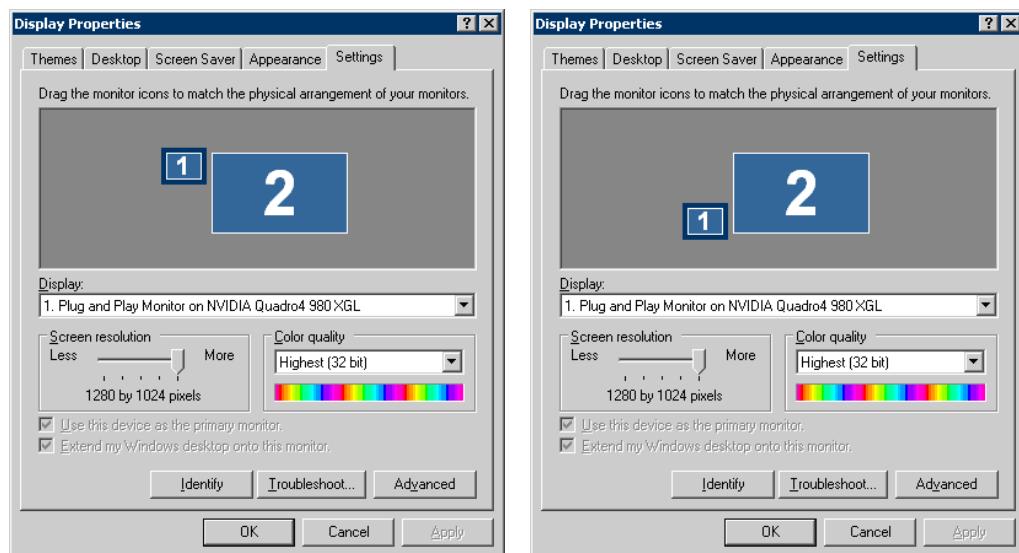


Fig. 3 Monitor display settings

2. Click **OK** twice to leave the display properties, but do **not** restart the computer.

## Checking Drive Assignments

This step is to ensure that the drives are properly assigned.

The partitions should be:

1. for system and applications: **MED\_SYSTEM (C:)**
2. for **DVD drive (D:)**
3. for **CD-RW drive (E:)**

### NOTE

If the drive letters for **DVD (D:)** and **CD-RW (E:)** are not correct, then select **Disk Manager** to change the drive letters manually.

If the drives are not correctly assigned, change the drive letters as follows:

1. Right mouse click on My Computer  $\Rightarrow$  Manage  $\Rightarrow$  **Disk Management**.
2. Right mouse click on **DVD-Drive**  $\Rightarrow$  Change Drive Letter and Paths  $\Rightarrow$  Change  $\Rightarrow$  **Assign ... and select D:\ from list**.
3. Accept message box appearing, do **not** boot the computer now.

4. Right mouse click on **CD-ROM** (CD-ROM1) ⇒ Change Drive Letter and Paths ⇒ Change ⇒ **Assign ... and select E:\** from list.
5. Accept message box that appears.

#### **Changing the Drive Letters (to be done only if D: and E: are interchanged)**

1. Choose Start -> Settings -> Control Panel -> Administrative Tools -> Computer Management (Local) -> Storage -> Disk Management.
2. Click **CD ROM 0** and press right mouse button to get the menu to change “Drive Letter and Path ...” for CD ROM 0: D and for CD ROM 1: E.

**NOTE**

---

**It is recommended to change first CD ROM 0 to H, then  
CD ROM 1 to E and finally CD ROM 0 to D.**

---

#### **Drive “Med\_System” (C:)**

Is the smaller hard disk (36 GB) used for OS and application components for DICOM.

#### **Drive “Med\_Data” (F:) for System Type *Basic***

2 striped hard disks (2x147 GB) are used for storing images.

**NOTICE**

---

**Before a database restore will be performed, the generated directories have to be copied back to C:\.**

---

#### **Drives “Med\_Data” (F:) and “SCR\_Data” (G:) for System Type *Option***

2 striped hard disks (2x147 GB) and one 1 additional hard disk (147 GB) are used for storing images.

**NOTICE**

---

**Before a database restore will be performed, the generated directories have to be copied back to C:\.**

---

## Optional: Installation of Safety Package

If the customer ordered the safety package proceed the following steps.

### ⚠ CAUTION

Only Trend Virus Scanner shall be used. This virus scanner does not remove any infected files, but pops up a message when infection is detected.

### ⚠ WARNING

If a virus scanner should be installed, a firewall needs to be present.

### Install virus scanner

Start the following batch file for installation:

1. D:\VirusScanner\install.bat
2. Batch file is running and virus scanner is installed automatically. A message appears when installation is finished.

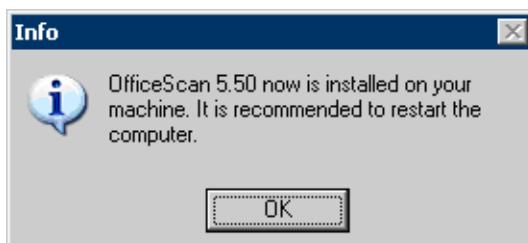


Fig. 4 Message: Virus Scanner Installation complete

3. Click **OK** and restart computer manually.
4. **Press shift key** while booting and log in as OS **administrator**.

### Configure the safety options and settings

- Excluding directories must be configured. Therefore open **Virus Scan Client** from **task bar**.

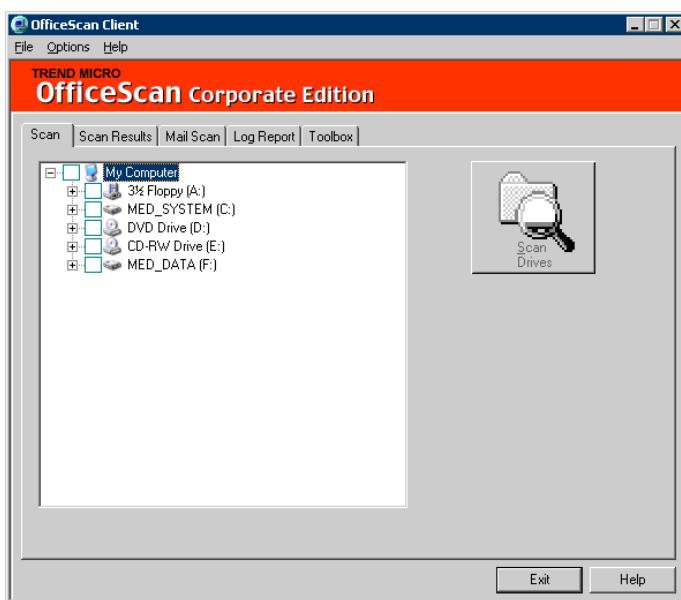


Fig. 5 Office Scan Client

- Open menu  $\Rightarrow$  Options  $\Rightarrow$  Exclusion List.

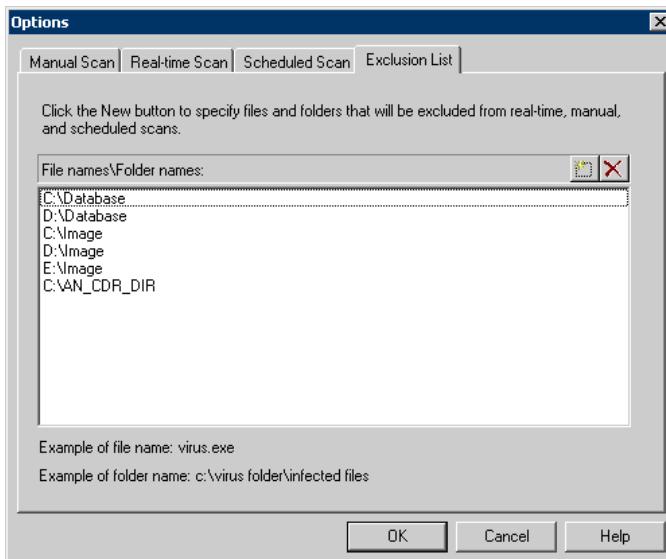


Fig. 6 Tab: Exclusion List

- Select one after the other and click on **delete** button (red cross on the right side) the following entries...
  - D:\Database
  - C:\Image
  - D:\Image
  - E:\Image

4. ... so that only the two following entries remain in the list.

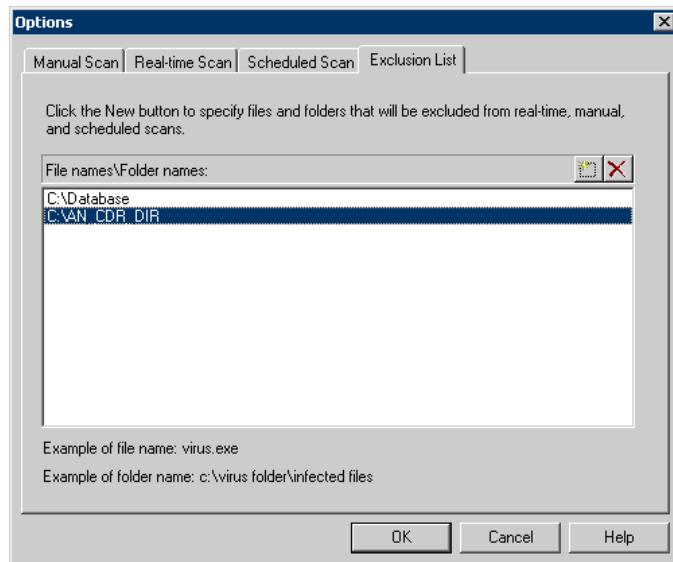


Fig. 7 Remaining Folders Exclusion List

5. Add the following folders to be excluded with click on **add** button and **press return key** after entering:
  - C:\MSSQLSERVER
  - F:\Image
  - F:\SCRData

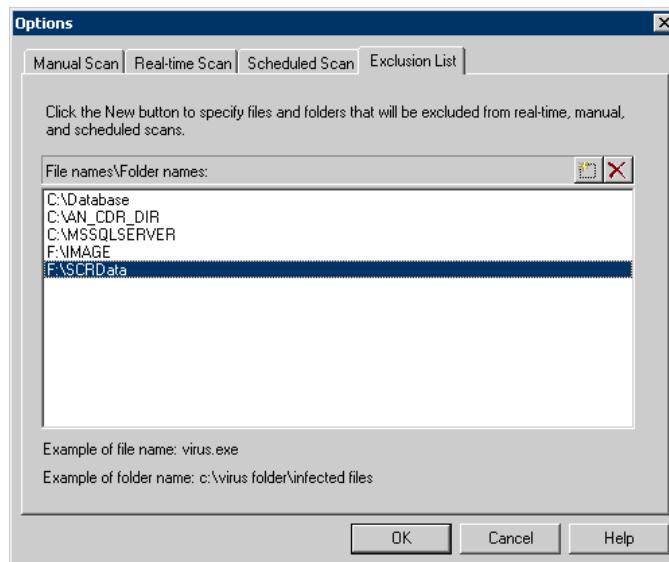


Fig. 8 Added folders to Exclusion List

6. Click on **OK** and change to tab **Scheduled Scan**.
7. Configure scheduled scan. The default setting for scheduled scan is weekly at midnight. It should be set to daily.

8. Change the value in the list box **Schedule Frequency** to **Daily**, Time should be **12:00 pm**.

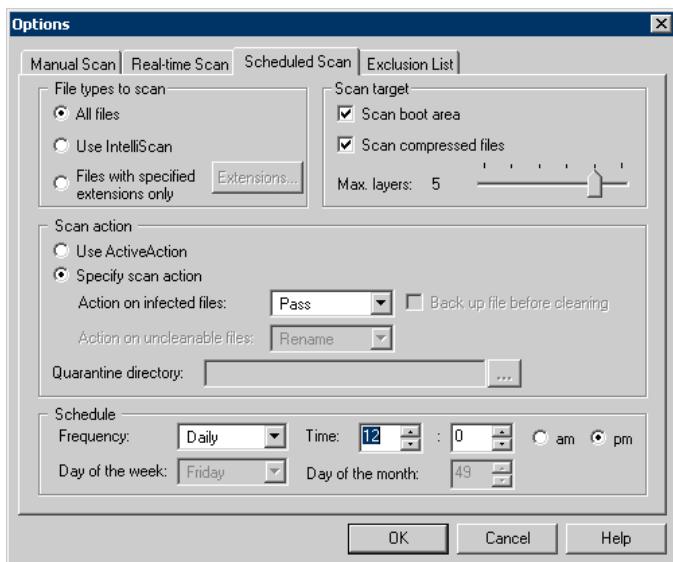


Fig. 9 Schedule frequency: Daily 12:00 pm

Click on **OK** to save the settings and **exit** Virus Scan Client.

**NOTICE**

If a new Virus scanner engine is available, check first if this engine version is released for customer installations before updating the engine!

## Changing Language Settings

To change the language:

- Double click on **LanguageSelector.exe** in C:\MBCSCR.  
The following dialog appears:



Fig. 10 Language Selector

- Choose language and confirm with **OK**.

The language settings in lightbox.ini will then automatically be switched to the selected language.

Currently four languages are available: English, French, German and Spanish.

Language	Setting in lightbox.ini
English	gb
French	fr
German	ger
Spanish	es

Tab. 1 Language Settings in lightbox.ini

**NOTE** For a Swedish version the English language shall be selected.

**NOTE** All messages generated by Windows XP will still be displayed in English, even if default language for MammoReport<sup>Plus</sup> is set to a different language.

## Changing the Keyboard Driver

To perform in case of production with predefined language setting.

The MammoReport<sup>Plus</sup> workstation is delivered with one of the following keyboards:

- US International keyboard:
  - Default input language: English (United States)
  - Installed service / Keyboard Layout: United States-International
- German keyboard:
  - Default input language: German (Germany)
  - Installed service / Keyboard Layout: German
- French keyboard:
  - Default input language: French (France)
  - Installed service / Keyboard Layout: French
- Spanish keyboard:
  - Default input language: Spanish (Spain)
  - Installed service / Keyboard Layout: Spanish
- Italian keyboard:
  - Default input language: Italian (Italy)
  - Installed service / Keyboard Layout: Italian
- Portuguese keyboard:
  - Default input language: Portuguese (Portugal)
  - Installed service / Keyboard Layout: Portuguese
- English keyboard:
  - Default input language: English (United Kingdom)
  - Installed service / Keyboard Layout: United Kingdom
- Swedish keyboard:
  - Default input language: Swedish (Sweden)
  - Installed service / Keyboard Layout: Swedish

---

**NOTE**

**To correct the fonts for Italian, Portuguese or Swedish keyboard run batch D:\batch\languages\import\_<x>.bat, with x = italian, portuguese or swedish.**

---

To change the keyboard language follow the steps below:

1. As user OS administrator select Windows **Start Menu** ⇒ **Settings** ⇒ **Control Panel**.

2. In Control Panel double click **Regional and Language tab**.

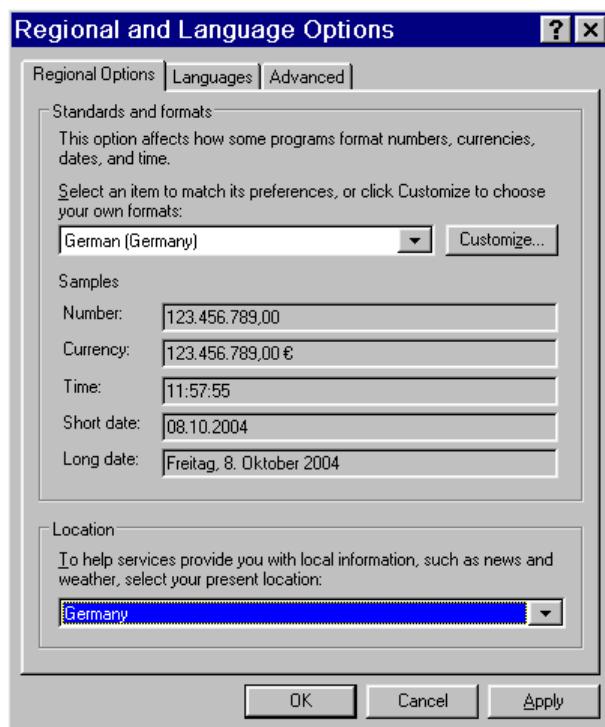


Fig. 11 Regional and Language Options

3. Choose **format** and **location** as required. Click **Apply**.
4. Click on tab **Languages**. Click button **Details**.

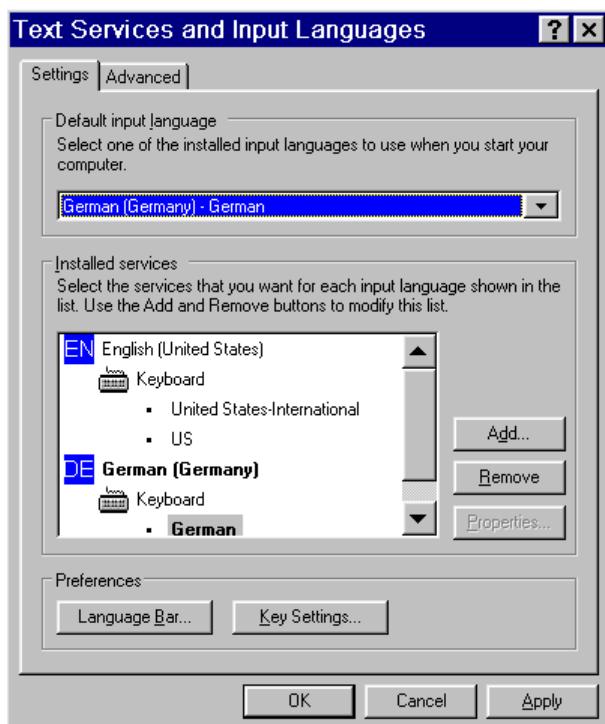


Fig. 12 Text Services and Input Languages

5. Select **Default input language** and **Installed services**. Click **OK**.
6. Click **OK** again.
7. If any changes have been made, restart the system.

## Turning off Warnings

In case on images appear the warning message *Image is not for medical diagnostic purposes.*, check in image information the manufacturer entry.

If the manufacturer entry is *HOLOGIC, Inc.* and the customer has a DROC workstation, the warning message can be turned off.

**NOTE**

**Only warnings on MG images “for presentation” can be turned off.**

Enter the following line into the C:\MBCSCR\Lightbox.ini file:

WARN\_HOLOGIC, Inc.:0

**NOTE**

**Turning off entries in the lightbox.ini for manufacturers has to be authorized by Siemens only.**

## Patient Orientation

These settings are necessary if DICOM MG images contain an incorrect patient orientation. Ignore Patient Orientation is configured using the file **C:\MBCSCR\IgnorePatientOrientation.ini**.

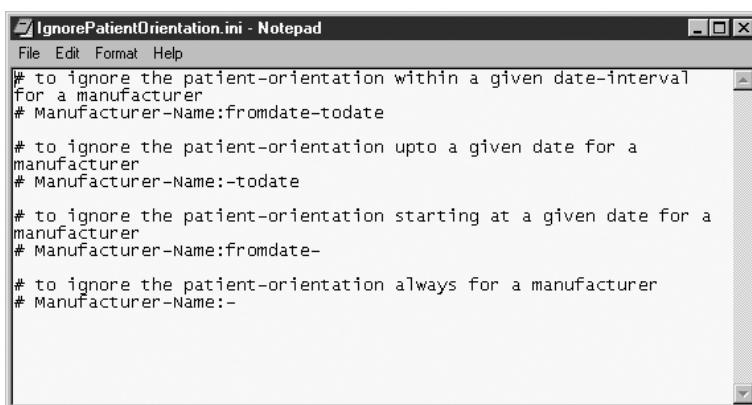


Fig. 13 IgnorePatientOrientation.ini

The entries of the configuration file have the following format:

- Comments are started by #, the rest of the line after # is ignored.

There are four different methods to define the time interval of study dates to be ignored. Dates are to be entered in the format: YYYYMMDD.

- YYYY four digits defining the year, e.g. **2003**
- MM two digits defining the month, e.g **02** for February
- DD two digits defining the day, e.g. **28**.

**NOTE**

If a date is invalid or empty it will be ignored.

Intervals can be defined using the manufacturer tag from the DICOM header (this information can be found in the image information window in the MammoNavigator of the MammoReport<sup>Plus</sup> system).

**Example:**

FUJI PHOTO FILM CO., LTD.

**Method 1: Define a start and end date**

manufacturername:fromdate-todate

**Example:**

FUJI PHOTO FILM CO., LTD.:20030115-20030315

For DICOM MG images from manufacturer FUJI PHOTO FILM CO., LTD. with study date from January 15th 2003 until March 15th 2003 (both dates are included) the patient orientation tag will be ignored.

**Method 2: Define only an end date**

manufacturername:-todate

**Example:**

FUJI PHOTO FILM CO., LTD.:-20030315

For DICOM MG images from manufacturer FUJI PHOTO FILM CO., LTD with study date up to March 15th 2003 (included) the patient orientation tag will be ignored.

Also if **fromdate** is not a valid date or empty, the patient orientation for each study before **todate** will be ignored, e.g. in the following entry the **fromdate** will be ignored:

FUJI PHOTO FILM CO., LTD.:20030229-20030315

**Method 3: Define only a start date**

manufacturername:fromdate-

**Example:**

FUJI PHOTO FILM CO., LTD.:20030315-

For DICOM MG images from manufacturer FUJI PHOTO FILM CO., LTD with study date from March 15th 2003 (included) the patient orientation tag will be ignored.

**NOTE**

**Check these settings in case an update of the modality of that manufacturer system is performed.**

**Method 4: Define no date**

manufacturername:-

**Example:**

FUJI PHOTO FILM CO., LTD.:-

For DICOM MG images from manufacturer FUJI PHOTO FILM CO., LTD the patient orientation tag will be ignored.

**NOTE**

**Check these settings in case an update of the modality of that manufacturer system is performed.**

**Manufacturer Configuration**

These settings are necessary if, for certain manufacturers,

- images are to be accepted for processing (**default**: images are not accepted)
- the LUT in the image DICOM header is not to be applied (**default**: LUT is applied)

Manufacturer configuration is done using the file **C:\MBCSCR\ManufacturerConfiguration.ini**.

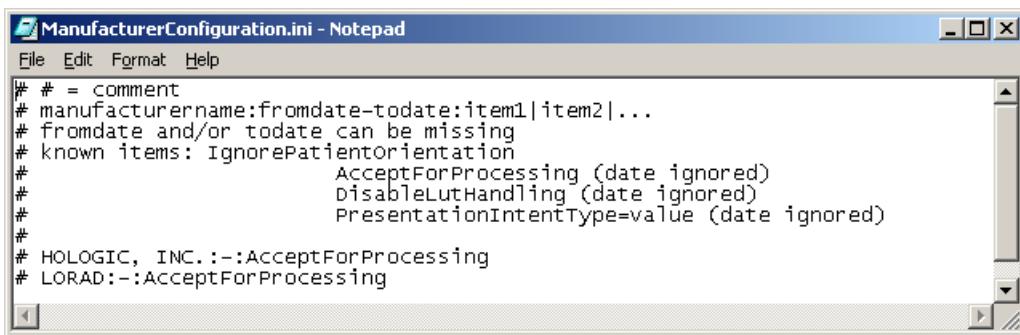


Fig. 14 ManufacturerConfiguration.ini

**Example:**

FUJI PHOTO FILM CO., LTD.:-AcceptForProcessing|DisableLutHandling

In this example, images from the manufacturer FUJI are accepted for processing but the LUT from the image DICOM header is not applied.

Note that the two conditions are separated by a |(pipe) character. Comments are started by #, the rest of the line after # is ignored.

## GE Processing

If GE Processing is to be enabled (default: off), the following steps are necessary:

1. In **C:/MBCSCR/lightbox.ini** search for GE\_ForPresentation and set value to 1.
2. In **C:/MBCSCR/ManufacturerConfiguration.ini** (see also Fig. 14), enter:  
GE MEDICAL SYSTEMS::DisableLutHandling
3. Reboot system.
4. Delete GE images completely from database using the "Delete Patients" functionality (see "Service Patients" on Page 7 - 12).
5. Resend GE images.

Steps 3 - 5 are only necessary if the system has already received GE images.

To disable GE Processing again, set GE\_ForPresentation:0 in step 1, delete entry from step 2 and repeat steps 3 - 5.

## Scanner LUT Configuration

These settings are necessary if a special LUT (stored in **C:\MBCSCR\Lut**) is to be applied for certain (scanned) images. Scanner LUT configuration is done in **C:\MBCSCR\scanner.ini**.

```
# by scanning a calibration film with a step wedge with known optical densities. The resulting curve that links these optical densities
# to image pixel values is specific to the combination of the scanner, the software version that created the DICOM images, and its
# configuration.

# Parameter block for the application of the scanner LUT to images that have been created with the
# following equipment:
# Manufacturer: R2 Technology, Inc.
# Model name: M1000-DG(EU)
# Film scanner: cfs300 (Canon)
# Software version: screen2.4
# Configuration: Dicom format MG

#LUT1_SOPCLASSUID: MG
#LUT1_SCANNER_MANUF:R2 Technology, Inc.
#LUT1_SCANNER_SWVERSIONS: screen2.4
#LUT1_SCANNER_DETECTORID:CFS300
#LUT1_SCANNER_FILE:R2Tech_M1000DG_screen2.4_cfs300.lut
```

Fig. 15 scanner.ini

Several parameters can be configured in separate blocks (n is the number of the nth block), so multiple scanner LUTs can be applied.

- manufacturer(LUTn\_SCANNER\_MANUF:)
- file containing the LUT which is to be applied (LUTn\_SCANNER\_FILE:)
- DICOM format, e.g. MG (LUTn\_SOPCLASSUID:)
- manufacturers model name (LUTn\_SCANNER\_MODELNAME:)

- software versions (LUTn\_SCANNER\_SWVERSIONS:)
- detector ID of film scanner(LUTn\_SCANNER\_DETECTORID:)
- range of study dates (LUTn\_SCANNER\_STUDYDATE\_START: and LUTn\_SCANNER\_STUDYDATE\_END)

The first two parameters must be set, the others are optional. If the parameters given in a parameter block are found in the DICOM header, the LUT is applied for the corresponding image.

**Example:**

```
LUT1_SOPCLASSUID:MG
LUT1_SCANNER_MANUF:R2 Technology, Inc.
LUT1_SCANNER_MODELNAME:M1000-DG(EU)
LUT1_SCANNER_SWVERSIONS:screen.2.4
LUT1_SCANNER_DETECTOID:CFS300
LUT1_SCANNER_STUDYDATE_START:2002-06-02
LUT1_SCANNER_STUDYDATE_END:2002-07-30
LUT1_SCANNER_FILE:first.lut

LUT2_SCANNER_MANUF:Fischer Imaging
LUT2_SCANNER_FILE:second.lut
```

## Read State Synchronization

These settings are necessary if the read state of the patients has to be synchronized with other workplaces. This is a license protected feature. Read state synchronization is configured in **C:\MBCSCR\SyncConfiguration.ini**.

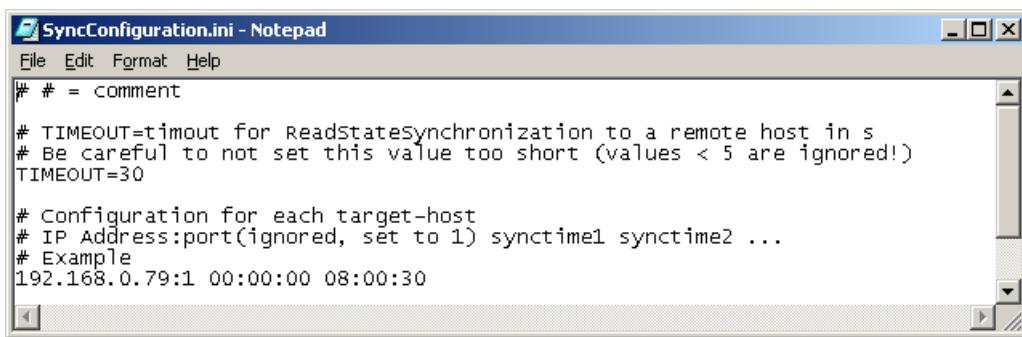


Fig. 16 SyncConfiguration.ini

The following parameters can be set in SyncConfiguration.ini:

- timeout in seconds (e.g. TIMEOUT=30)
- IP address and port of remote host (IPaddress:port)
- time of automatic synchronization (multiple sync times can be entered)

## Example:

```
TIMEOUT=30  
186.168.0.86:1 00:00:00 08:00:30  
182.148.0.88:1 00:01:00 09:00:30
```

The read state synchronization can be done manually by SCR Administration in the Settings Tab.

**NOTE**

**It is advised to have entered different synchronization times at all connected workplaces to avoid a network traffic overload.**

## System Settings

Inform customer about differences in settings for **Closing A Case**.

Refer to "Operator Manual" (SPB7-420.620.20 ....)

**CAUTION!**

**Configure the settings only on an empty database and before sending any image to MammoReportPlus.**

**The settings cannot be changed afterwards.**

Refer also to "Customized System Settings" on Page 8 - 1

## Increasing the size of the mouse pointer

To increase the size of the mouse pointer, perform the following steps:

1. Click **Start** button and select **Settings/Control Panel**.
2. Double click on **Mouse** to open the Mouse Properties.
3. Select the Pointer tab to change the size of the mouse pointer.

## Size of CAD Markers and Micro calcifications

If the size of CAD markers and micro calcifications has to be adjusted, this can be achieved by following entries in **C:\MBCSCR\lightbox.ini**:

- CAD\_MARKER\_SIZE (size of CAD markers)
- CAD\_PEN\_SIZE (pensize of CAD markers)
- CAD\_MICROCALC\_SIZE (line thickness of micro calcifications)

## Example:

```
CAD_MARKER_SIZE:28  
CAD_PEN_SIZE:5  
CAD_MICROCALC_SIZE:3
```

## Routing of modalities from syngo to SCR

By default only modalities MG, CR, SC, US, MR are routed from syngo to SCR. If this is to be changed, the following steps must be performed:

1. Press windows key
2. Open windows explorer
3. Double click onto file SCRRouter\_BE.pm in C:\MBCSCR\syngo\config\
4. Go to end of file

Default modalities are defines in the following line:

```
CONFIG dynamic SCRRouter_BE Service_Object *
%LIGHTBOX%\Syngo\Backend\SCRRouter_BE%GMDLL%:_make_SCRRouter_BE ()
"-M %MED_MOD_CHANNEL% -A MBC_SCR -F MG -F CR -F SC -F US -F
MR -D SCR_SYNGO -T 300"
```



Fig. 17 Configuration file for routing of modalities

If the customer does not want to look at MR images on HR monitors, delete the part “-F MR” from the list:

```

SCRRouter_BE.pm - Notepad
File Edit Format View Help

### Component definition for SCRRouter_BE server:

NEXT_COMPONENT SCRRouter_BE_server
CONTAINER CM_SCRRROUTER_BE_CONTAINER
CONFIG dynamic SCRRouter_BE Service_Object *
%LIGHTBOX%\Syngo\Backend\SCRRouter_BE%GMDLL%:_make_SCRRouter_BE_O "-M %MED_MOD_CHANNEL%
-A MBC_SCR -F MG -F CR -F SC -F US -D SCR_SYNGO -T 300"
# -A: Application Channel
# -M: Modality Channel
# (see Application Templates Users Guide)
GROUP SCR_SNGO,SCR,backend
MASTER yes,no
CREATION CM_BE_CREATION
SYNCHRON CM_SYNC_COMP
LIFETIME CM_BE_LIFETIME
ON_EXIT restart
##Begin of UW 2004-11-12 restartchanged from CM_BE_RESTART
RESTART 5000
##End of UW 2004-11-12 restartchanged from CM_BE_RESTART
DELAY_END CM_DELAY_END
CONDITION CM_BE_CONDITION; !SCRRouter_BE_disabled=1
PASSTHROUGH

```

Fig. 18 Modality MR deleted in configuration file

If e.g. also TG 18 test images should be routed to SCR, add “-F OT”:

```

SCRRouter_BE.pm - Notepad
File Edit Format View Help

### Component definition for SCRRouter_BE server:

NEXT_COMPONENT SCRRouter_BE_server
CONTAINER CM_SCRRROUTER_BE_CONTAINER
CONFIG dynamic SCRRouter_BE Service_Object *
%LIGHTBOX%\Syngo\Backend\SCRRouter_BE%GMDLL%:_make_SCRRouter_BE_O "-M %MED_MOD_CHANNEL%
-A MBC_SCR -F MG -F CR -F SC -F US -F MR -F OT -D SCR_SYNGO -T 300"
# -A: Application Channel
# -M: Modality Channel
# (see Application Templates Users Guide)
GROUP SCR_SNGO,SCR,backend
MASTER yes,no
CREATION CM_BE_CREATION
SYNCHRON CM_SYNC_COMP
LIFETIME CM_BE_LIFETIME
ON_EXIT restart
##Begin of UW 2004-11-12 restartchanged from CM_BE_RESTART
RESTART 5000
##End of UW 2004-11-12 restartchanged from CM_BE_RESTART
DELAY_END CM_DELAY_END
CONDITION CM_BE_CONDITION; !SCRRouter_BE_disabled=1
PASSTHROUGH

```

Fig. 19 Modality OT added to configuration file

If all changes are done, perform the following steps:

1. Save the file with changes and note the changes in the configuration data sheet (see "Routed modalities from syngo to SCR" on Page 4 - 7).
2. Reboot the system.
3. Delete images that should not be routed from the database.
4. Send images that should not be routed / should be routed according to changes to check if changes are valid.

## Add DROC Images

If DROC images should be available on HR monitors, a database script for SCR database needs to be run and the images copied to the correct directory.

1. Make sure you are logged in as OS administrator.

**CAUTION!**

**The SQL script to import DROC patients can be run only on an upgraded Database. If a new database is generated according to Appendix, syngo and SCR system have to be started first - then the database is upgraded.**

2. Run the batch C:\MBCSCR\SQLScripts\ImportDrocPatients.bat and check in log file C:\MBCSCR\SQLScripts\Log\SQLServerImportDrocPatients.log so that it contains lines like - (1 row affected) - but no error messages.
3. Copy the 20 files from C:\MBCSCR\DROCIImages\ to the configured DICOM Directory, either F:\SCRData\dicom\ or G:\SCRData\dicom\.

**NOTE**

**The configured DICOM directory can be found in initialization file C:\MBCSCR\lightbox.ini, entry in line "DICOM:".**

4. The DROC Patients appear in SCR Service and SCR Administration Patient List, after the system is booted.

## Requirements

### System Requirements

The system requirements are described in the document Planning Guide SPB7-420.891.20..." and in chapter 2, "Systems overview".

### General Requirements

- The PC must be operational and connected to the network.
- The MammoReport<sup>Plus</sup> dongle must be connected to the parallel port (D25 connector).
- All required data for configuration must be available, e.g. the checklists in chapter 4, "Configuration Data Sheets" must be fully completed.

#### ⚠ CAUTION

**Always check the exchange board. If garbage is found in exchange board, remove it!**

#### ⚠ CAUTION

**Always check the time when time-limited licenses expire.**

## Settings

This section describes the syngo settings necessary for the startup of the SCR software. For further settings done during installation refer to document SPB7-420.812.21... "Installation of Software".

1. Power-on the workstation.
2. Login to syngo as administrator.
3. Select Options-> Service-> Local Service

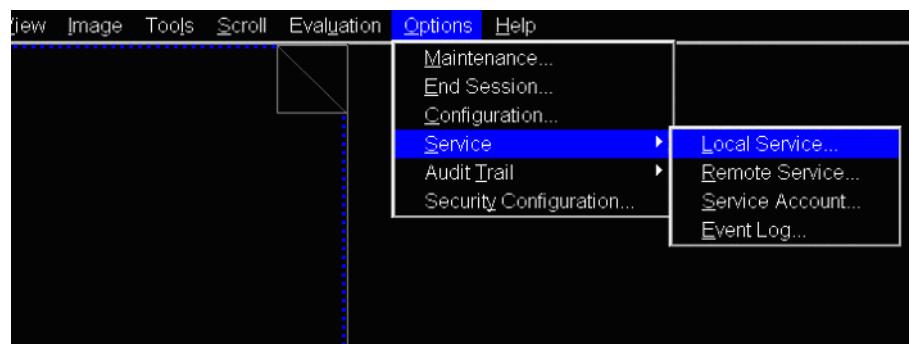


Fig. 1 Options menu

**syngo Service Software Interface**

1. The syngo Service Software Interface opens.

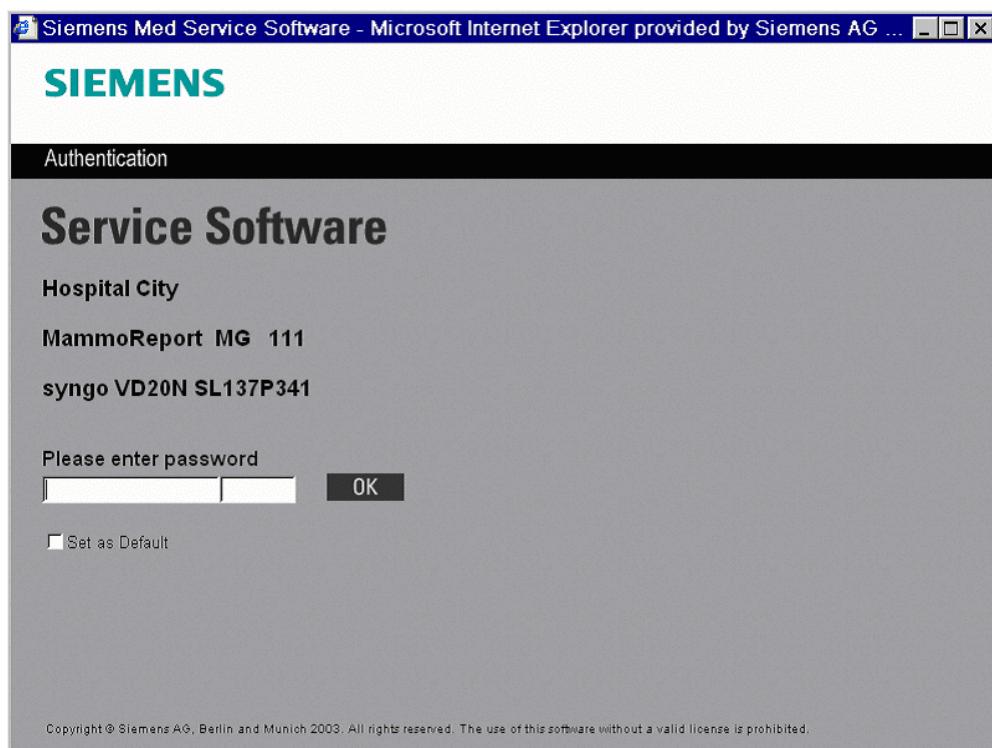


Fig. 2 syngo Service Software interface

2. In the Password field, enter 14-digit service key and 6 digits password. Click **OK**.

### 3. Click Configuration

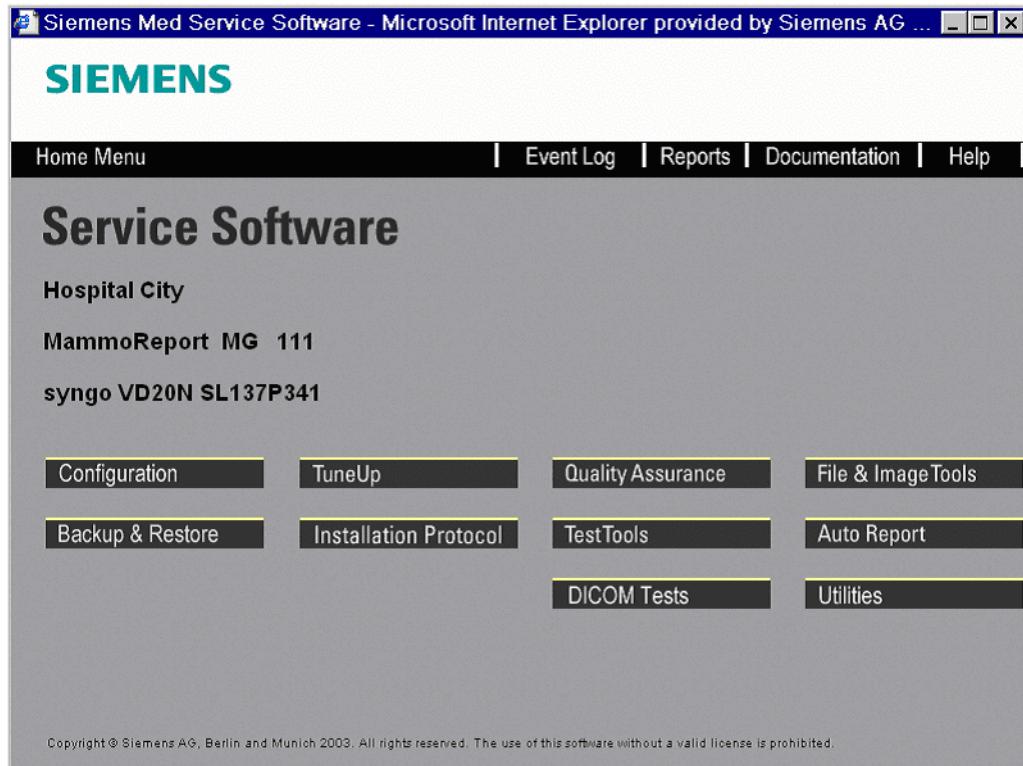


Fig. 3 syngo Service Software menu

## System Options

1. Select in addition DICOM Print Devices and Paper Printer if required and click on **Next**.

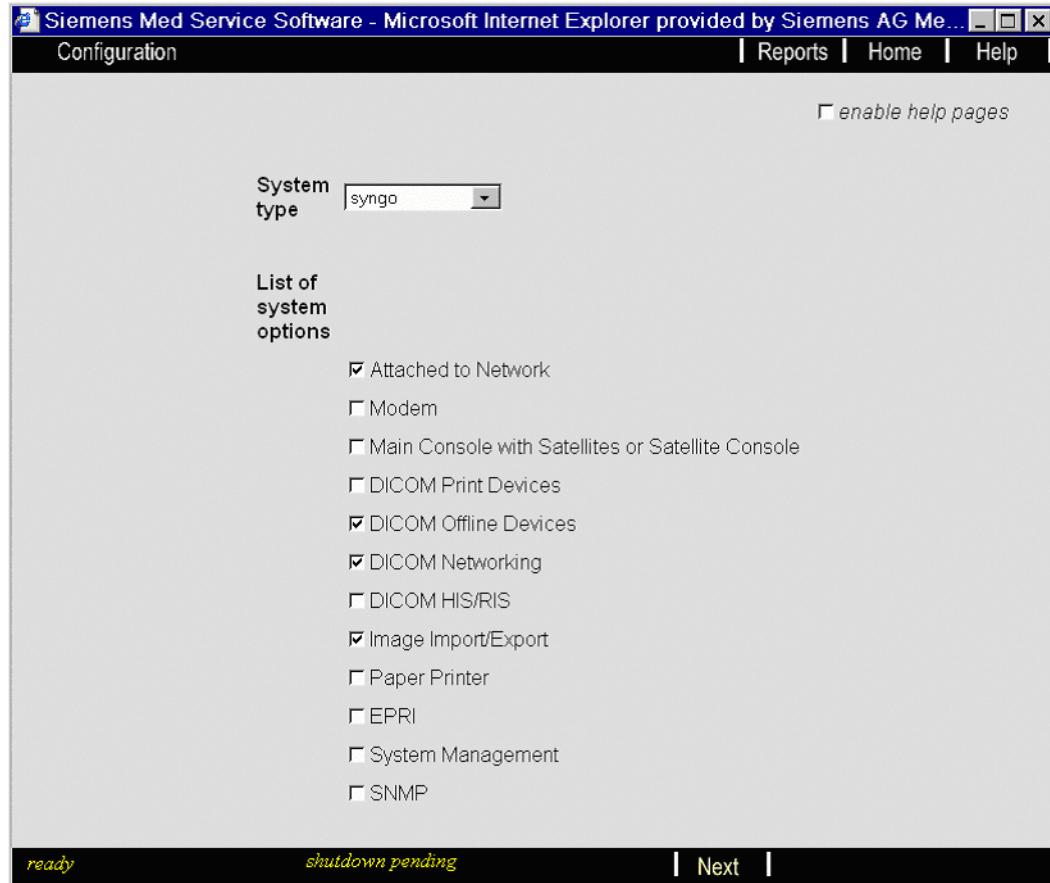


Fig. 4 System options

## Local Host Settings

1. Select Local Host > Site info.

The screenshot shows a web-based configuration interface for Siemens Med Service Software. The left sidebar contains a navigation tree with categories such as Local Host, Security, Service, DICOM, Import/Export, External Devices, and Applications. Under Local Host, 'Site Info' is selected. The main area is titled 'System' and shows fields for Material No (8646460), Rdiag Prefix (MG), Serial No (empty), Department (empty), and Station Name (MBCPC). To the right, under 'Customer and Address', there are fields for Name (Customer), Id (Id), Hospital (Hospital), Street (Street), Street No (StreetNo), Zip Code (ZIP), Phone No (Phone), City (City), District (District), Country (Country), and Administrator (Administrator). At the bottom, a status bar says 'ready' and contains buttons for '>', 'Save', and '<'.

Fig. 5 Local Host > Site info settings

2. Change Station Name, change handed over date, fill in customer specific data in **Customer and Address** and click on **Save**.

3. Select ">" and check if time zone is correct. If needed, change to appropriate time zone.

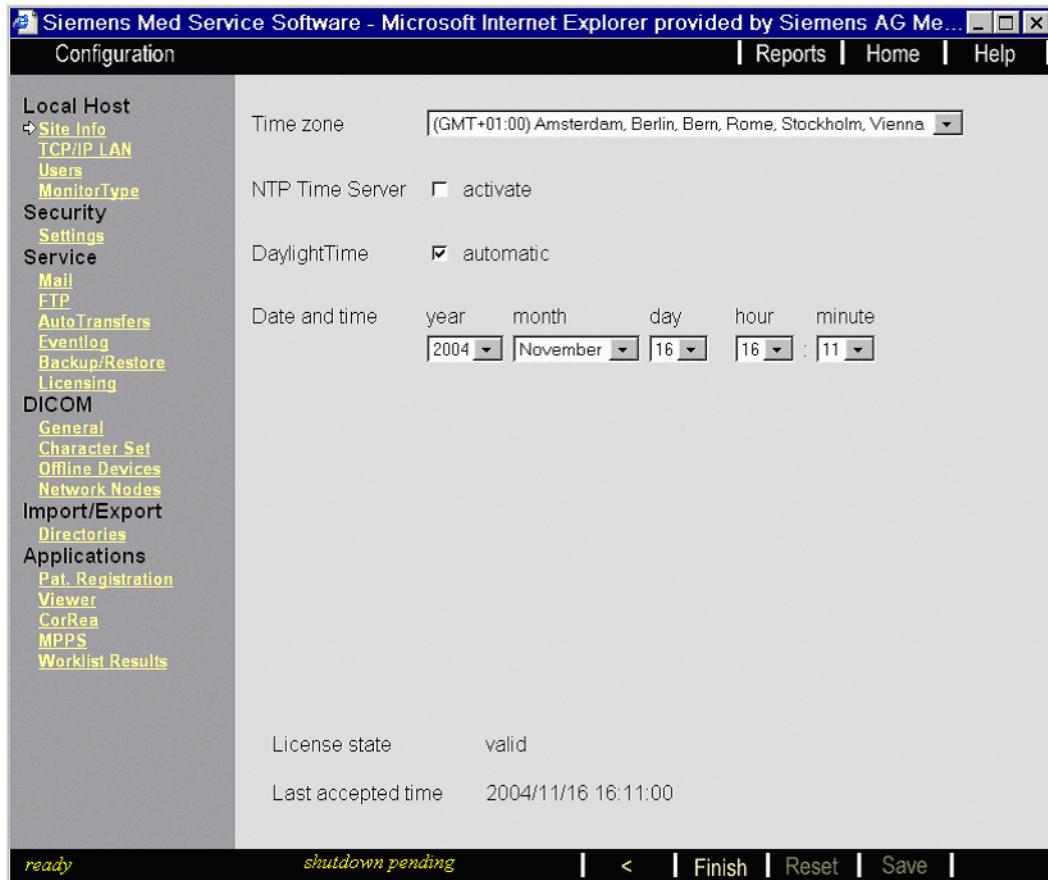


Fig. 6 Time and time zone settings

**CAUTION!**

**DONT change the Date and TIME, only the Time Zone - NEVER change the time more than 24 hours back!**

4. If Read State Synchronization is to be done (license protected feature), the NTP time server has to be activated. In this case, enter the IP Address of the time server and click **Next**.
5. Click **Save** after changes have been made.

## TCP/IP LAN Settings

1. Select Local Host > TCP/IP LAN.

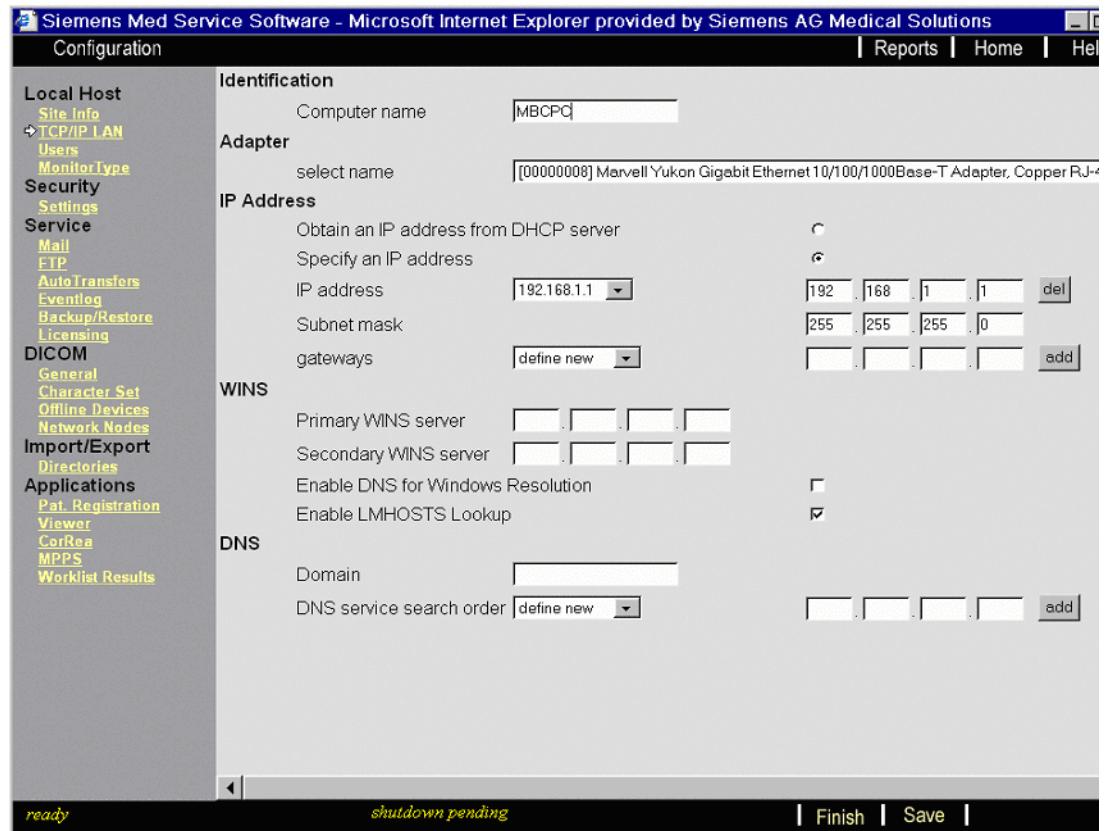


Fig. 7 TCP/IP LAN settings

2. Enter again Computer name (station name).
3. Delete dummy IP address and enter the correct data for customer network.
4. Click **Save**.

### General DICOM Settings

1. Select **DICOM > General** and enter Station/Computer name given in Site Info and TCP/IP LAN before.

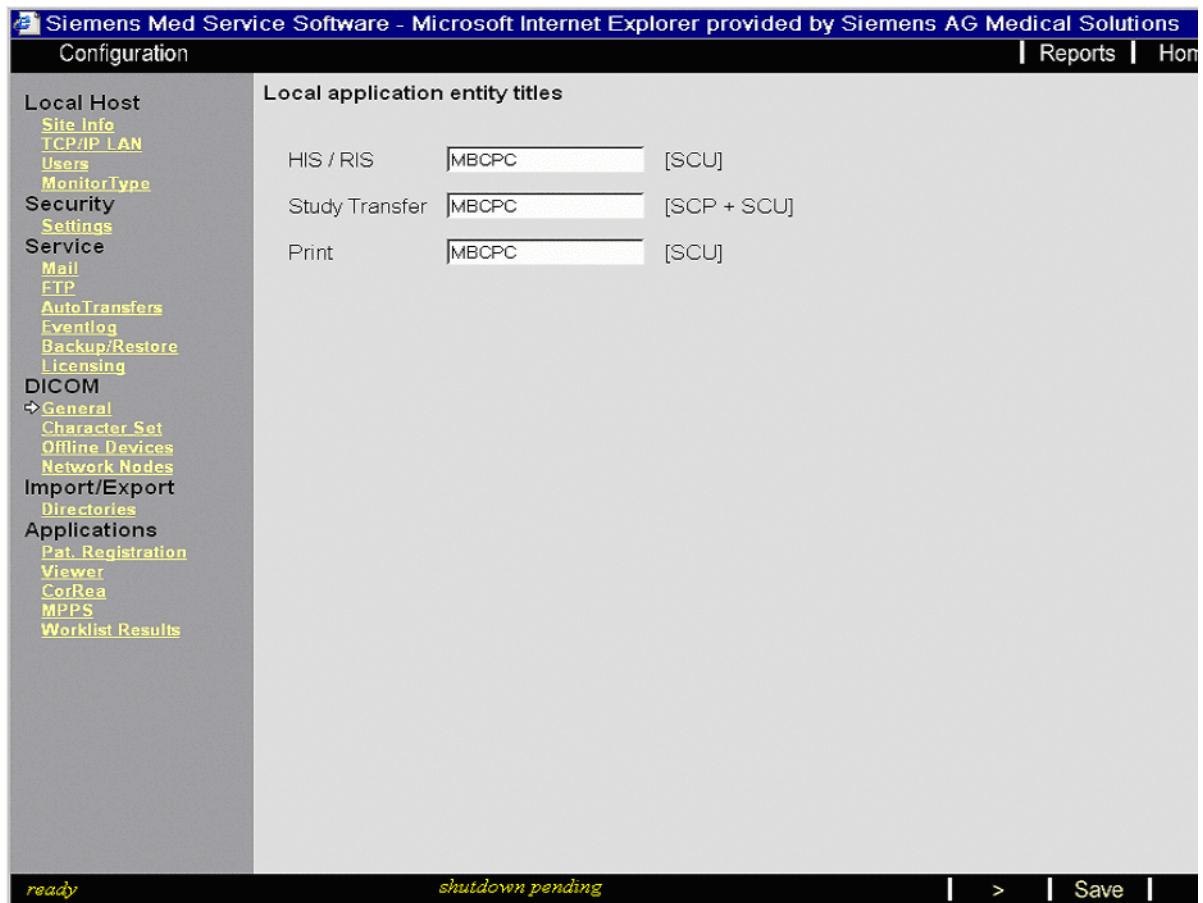


Fig. 8 General DICOM settings

2. Click **Save**.

3. Select **DICOM > Network Nodes** and select define new in **Select Host**.

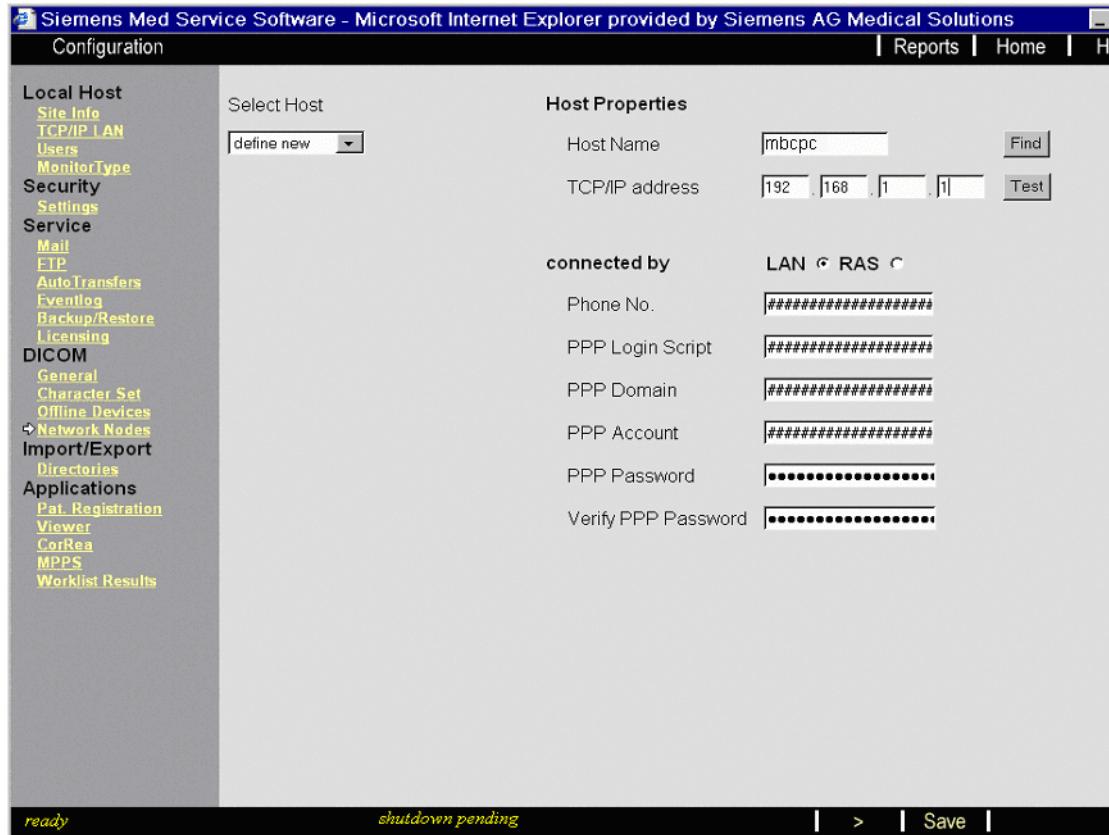


Fig. 9 DICOM network nodes settings: host properties

4. Enter for Host Name, the Computer Name (Station Name) and the IP address from TCP/IP LAN settings. Check connection by pressing Test.
5. Repeat the last two steps for all DICOM nodes (e.g. PACS) that are to be configured.

**NOTE**

If auditing is to be used for storage on network, define the destination computer as network node!

6. Click **Save** and click “>”.

7. Select under HOST the <station/computer name> and enter in edit Name **SCR\_SYNGO** and edit AE Title <**STATION/COMPUTER NAME**>\_SCR.

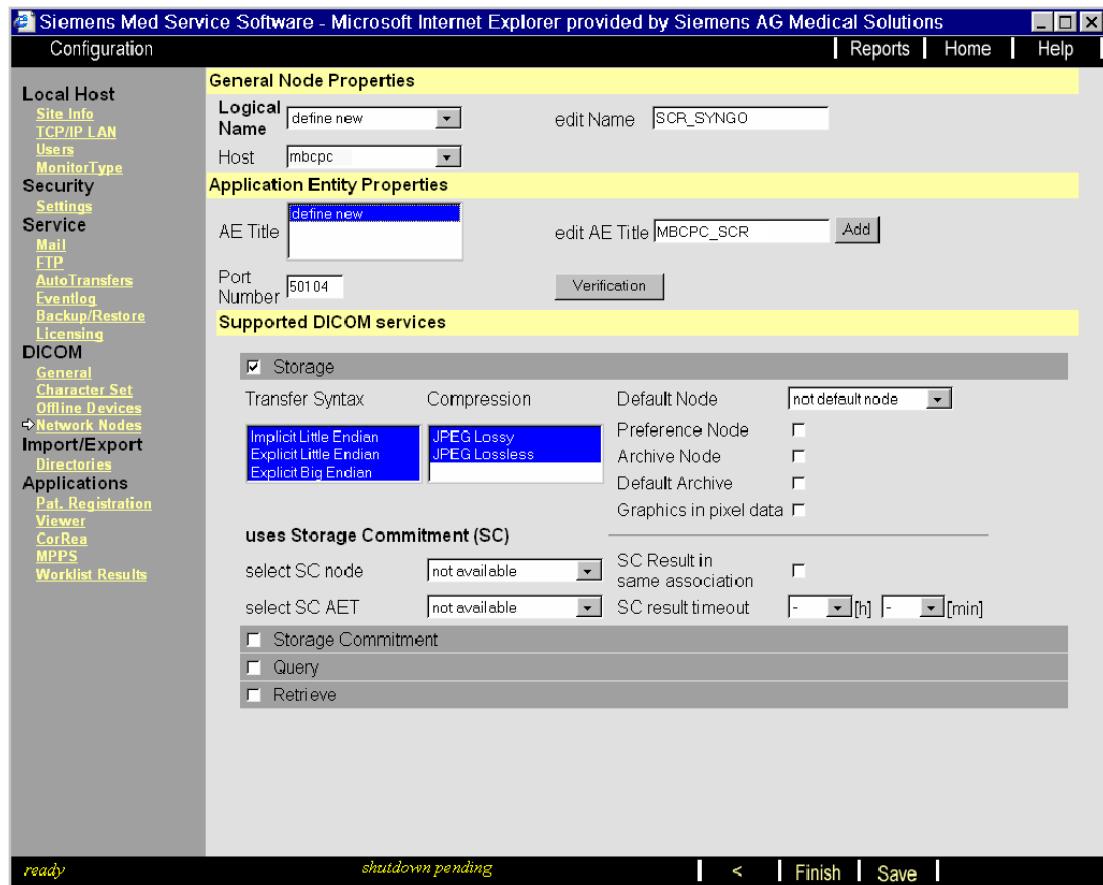


Fig. 10 DICOM network nodes settings: other properties (AE Title is MBCPC\_SCR)

**CAUTION!**

**Don't enter any other name than SCR\_SYNGO under "edit Name"!**

8. Enter port number 50104.
9. Select supported DICOM service *Storage* and click **Add**.
10. Select the AE Title <**STATION/COMPUTER NAME**> and click **Save**.
11. Now configure other DICOM nodes. Select respective node under HOST and edit suitable name and AE title, e.g. MITRA.
12. Enter suitable port number, e.g. 104 for most PACS.
13. If configuring a PACS, select supported DICOM services *Storage*, *Query* and *Retrieve* and click **Add**.

**NOTE**

**The default Q/R node has to be configured first.**

14. Select the respective AE Title and click **Save**.

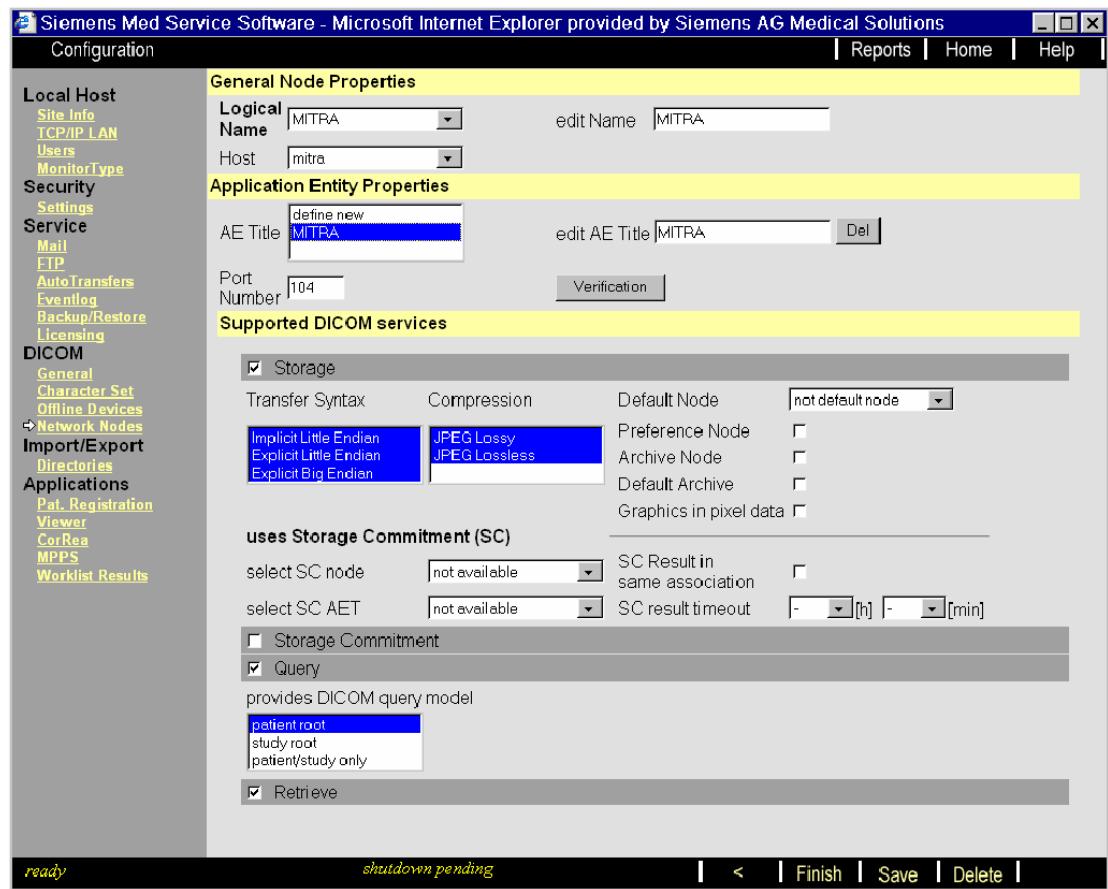


Fig. 11 DICOM network nodes settings: PACS configuration

**CAUTION**

Be careful when configuring target nodes for storage commitment. In the DICOM conformance statement of the node, make sure that storage commitment is supported before configuring it.

15. Repeat last four steps for the remaining DICOM nodes.

**NOTE**

If no CAD server is configured, CAD SR will not be routed to SCR.

## Read Synchronization

If Read Synchronization between MammoReport workstations is to be established, the other workstation(s) need to be defined as hosts. E.g. if the other workstation being synchronized is named CELSIUS01, enter this as Host Name, with the corresponding IP address as shown in the following figure.

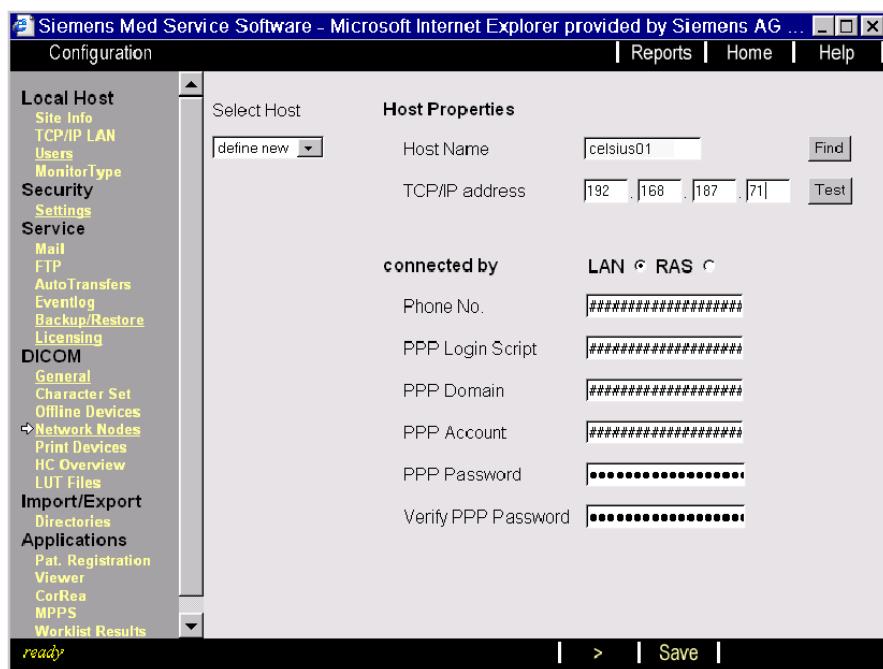


Fig. 12 DICOM network nodes settings

1. Click **Save**.
2. Message about saving was successful appears, click **OK**.
3. Then click **Next**.

In addition, two special ports need to be opened for sending and receiving the read status of patients (4745 and 4746). For this purpose define two AETs with these ports as network nodes. The logical names and AETs should be defined according to the following convention.

## Defining Receiver

1. Select Host of other workstation, e.g. if it is celsius01, just configured.
2. Define new Logical Name and AE Title “CELSIUS01\_REC”, Port Number must be 4746.
3. Select DICOM service Storage.

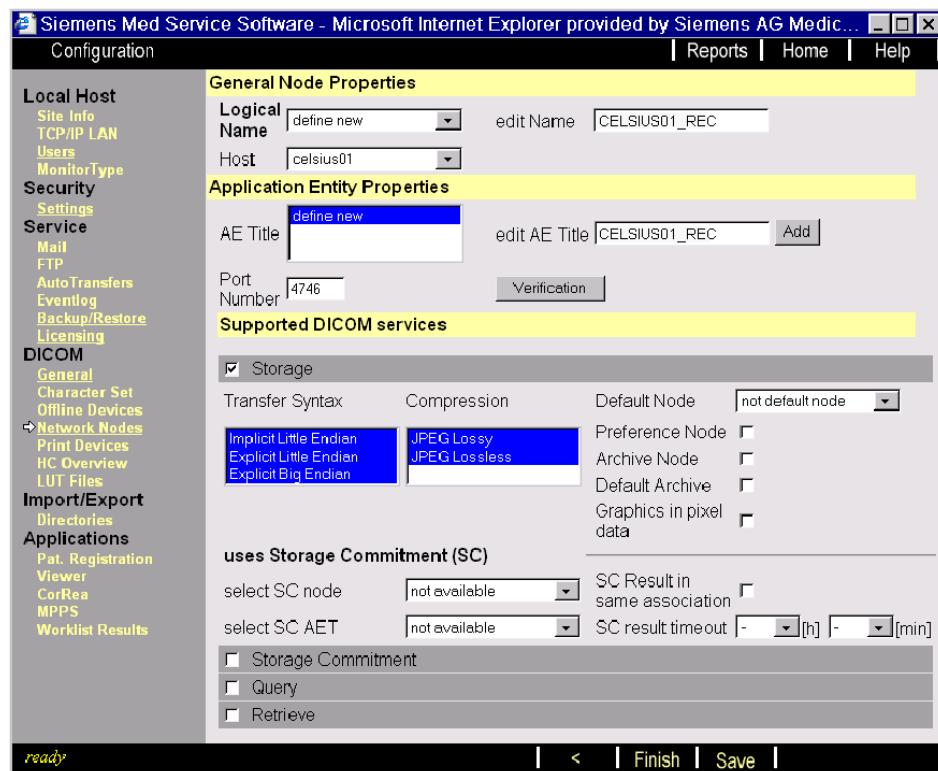


Fig. 13 Defining Network Node Receiver

4. Click **Add** and **Save**.
5. Accept the message box that appears with **OK**.

## Defining Sender

1. Select Host **celsius01** again.
2. Define new Logical Name and AE Title “**CELSIUS01\_SEND**”, Port Number must be 4745.
3. Select DICOM Service Storage.

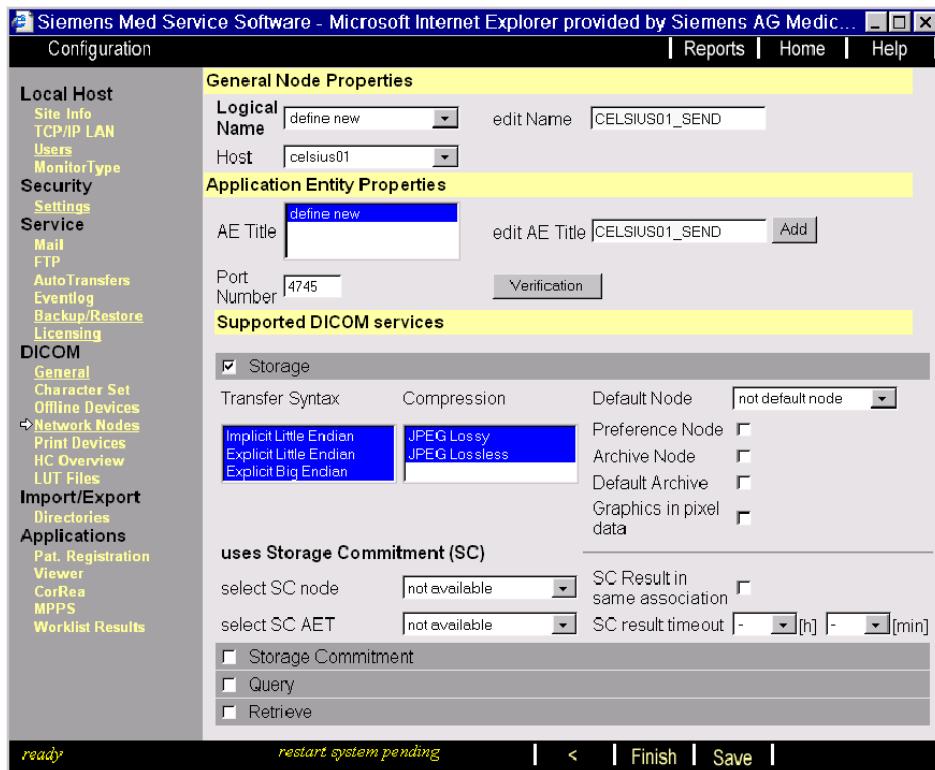


Fig. 14 Defining Network Node Sender

4. Click **Add** and **Save**.
5. Accept message box that appears with **OK**.
6. If another workstation is to be synchronized in addition, define also this workstation as host and open the two ports 4745 and 4746 by defining two network nodes on this host by repeating steps 1-10 with that workstation name, e.g. CELSIUS03 instead of CELSIUS01.

## DICOM Printing

**⚠ CAUTION**

Be aware that only released settings for Cameras should be used.

- Now configure DICOM Printer if required. The following images show the configuration for various printers and dot matrices:

The screenshot shows the 'Configuration' page of the Siemens Med Service Software. The left sidebar lists various service options like Site Info, TCP/IP LAN, Users, MonitorType, Security, Settings, Service, Mail, FTP, AutoTransfers, Eventlog, Backup/Restore, Licensing, DICOM (General, Character Set, Offline Devices, Network Nodes), Print Devices, HC Overview, LUT Files, Import/Export, Directories, Applications, Pat. Registration, Viewer, CorRea, MPPS, Worklist Results. The main panel shows 'Select HC device' set to 'DP7000HR'. Under 'General Settings', 'HC Device' is 'DP7000HR', 'Type' is 'DICOM printer', 'Class' is 'fujidrypix7000HiRes', 'DICOM Node' is 'log\_dp7000', 'Location' is empty, and 'Comment' is 'No Comment'. Under 'Filming Properties', 'Hold printed filmjobs' is set to 10, 'min density' is 20 [0..1], 'Pixel Size [1/1000mm]' is 50 x 50, 'Film Sheet Formats Portrait' is 'Inch8x10', 'Film Sheet Formats Landscape' is 'Inch8x10', 'Medium type' is 'blue film', 'Film destination' is 'processor', 'color appearance' is 'Grayscale 12 bit', 'background' is 'black', and 'Transformation' is 'no magnification'. There are two tables for 'Film Sheet Format' and 'Number of Pixel [cols,rows]': one for 'Portrait' (Inch8x10, 3907 x 4819) and one for 'Landscape' (Inch8x10, 4931 x 3795). The bottom status bar says 'ready'.

Fig. 15 Fuji DP 7000 8 x 10 in

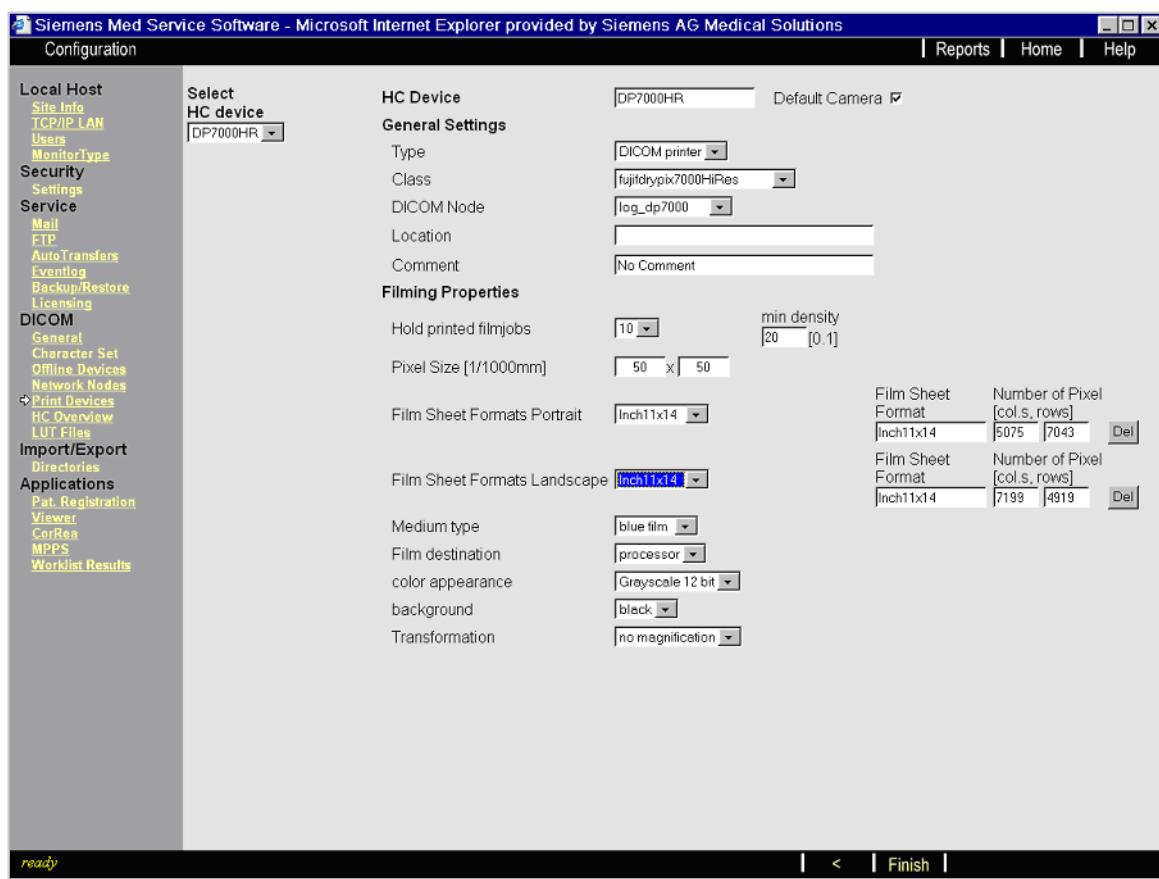


Fig. 16 Fuji DP 7000 11 x 14 in

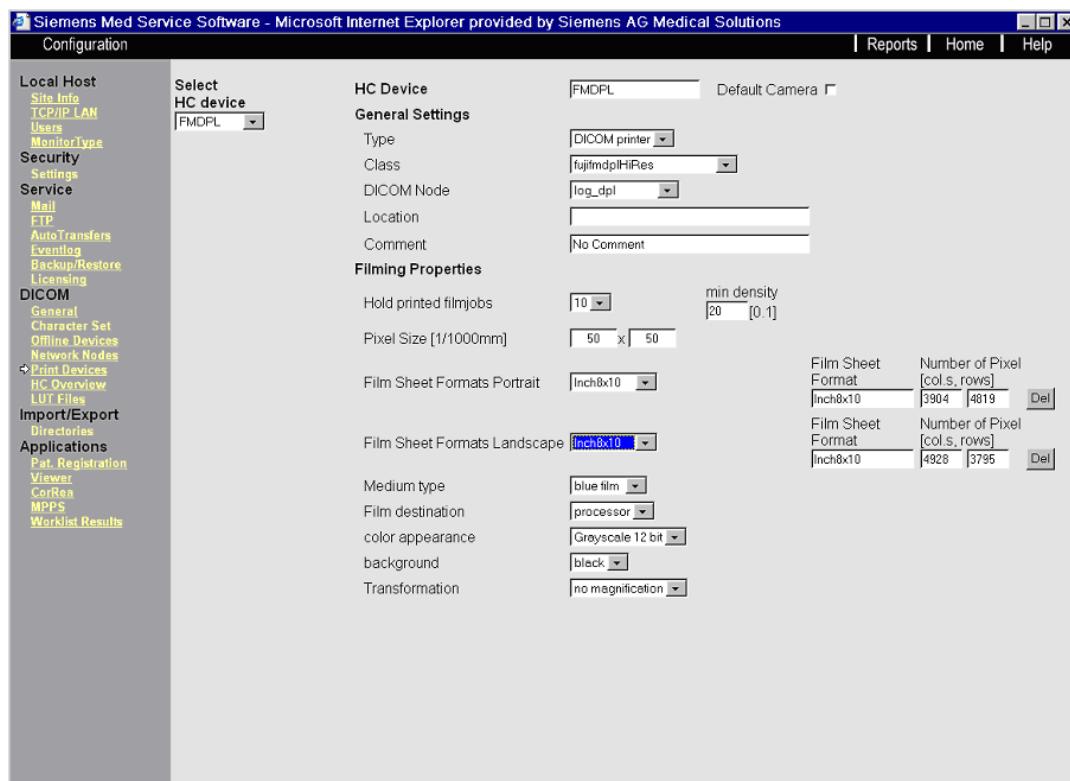


Fig. 17 Fuji FM-DPL 8 x 10 in.

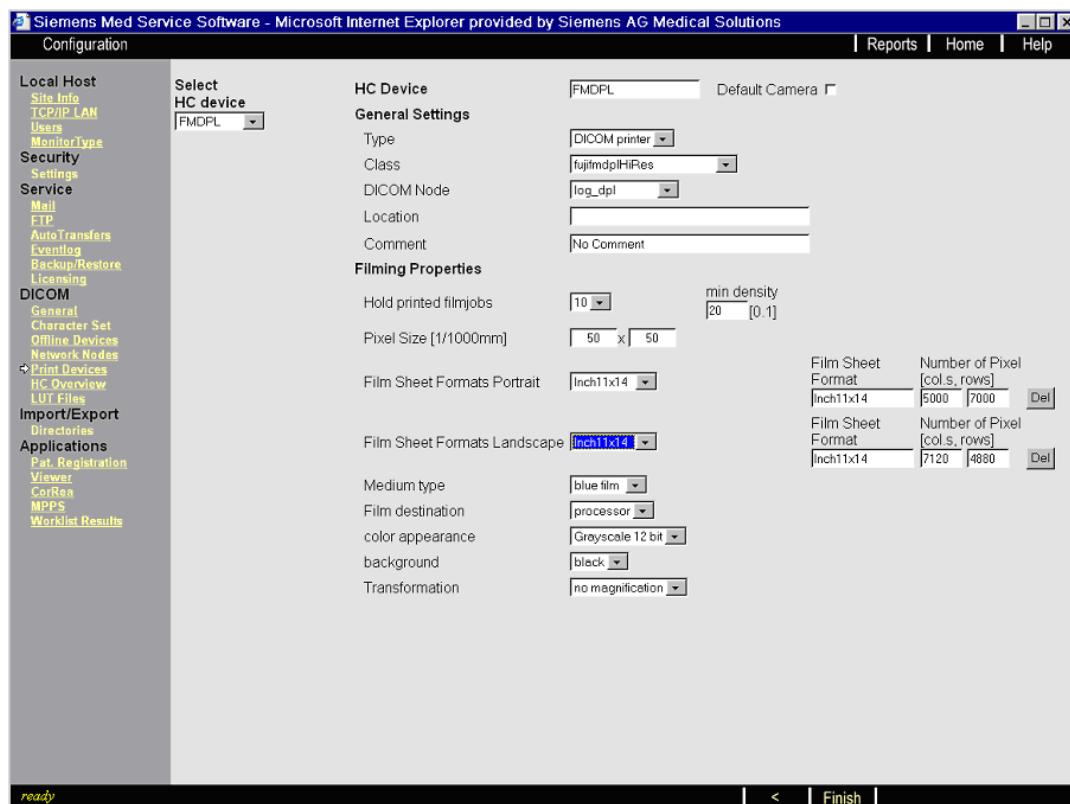


Fig. 18 Fuji FM-DPL 11 x 14 in.

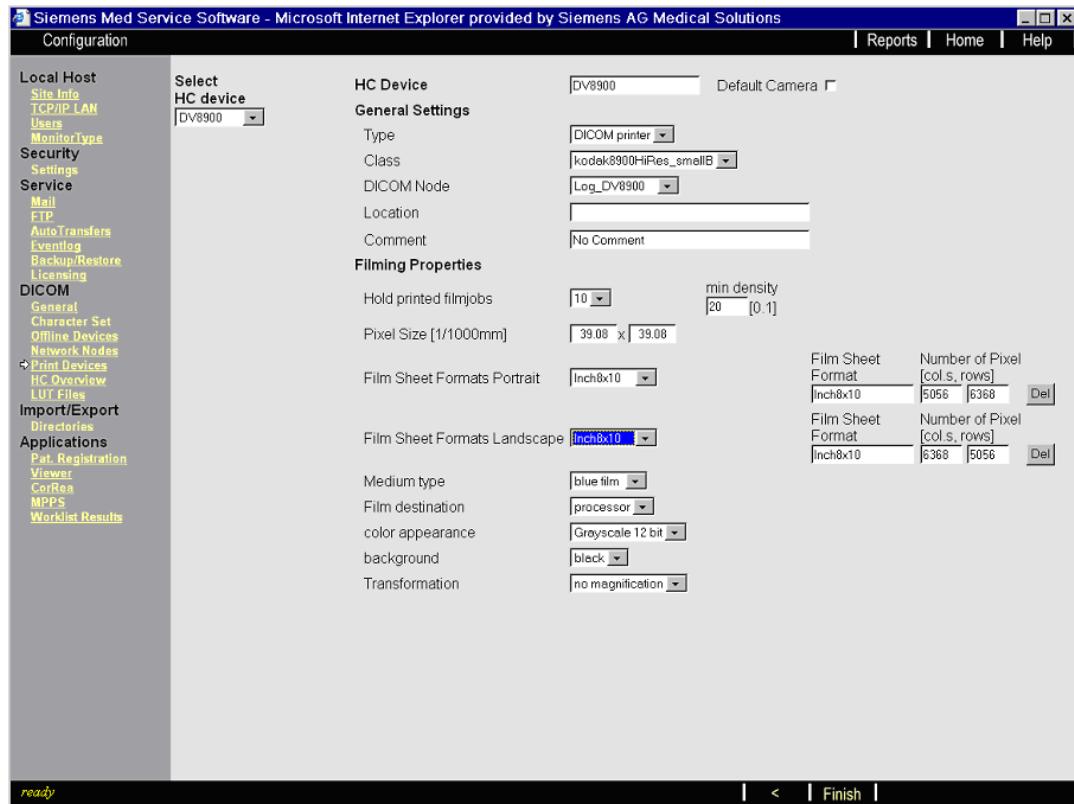


Fig. 19 Kodak Dry View 8900 8 x 10 in.

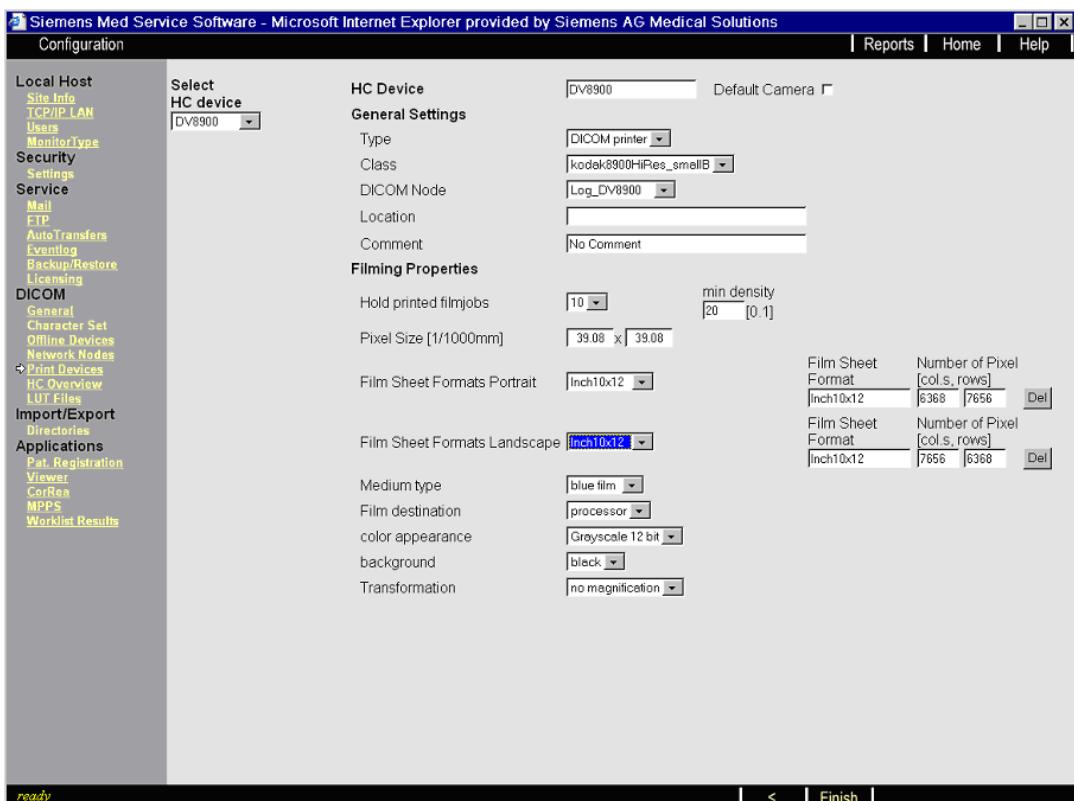


Fig. 20 Kodak Dry View 8900 10 x 12 in.

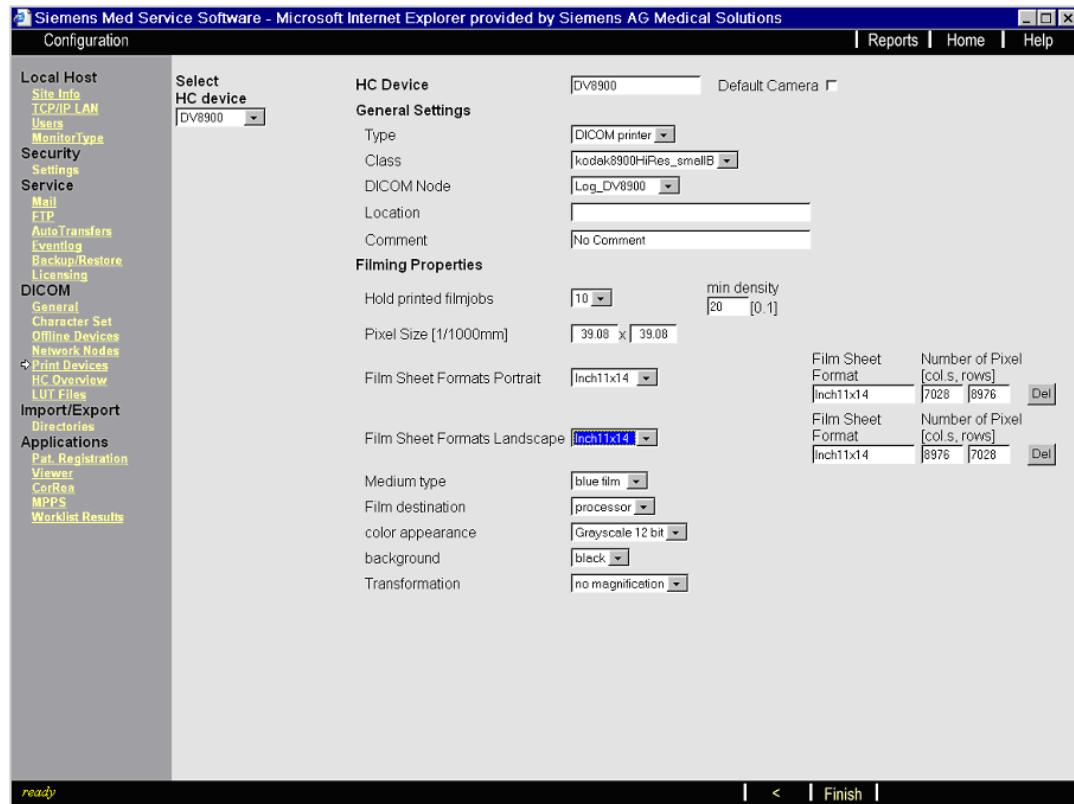


Fig. 21 Kodak Dry View 8900 11 x 14 in.

### NOTICE

**In case the Save button is not available in Local Service when modifying an existing hardcopy device, remove that device from the list of configured devices and re-configure it.**

### CAUTION

**Always check the exchange board. If garbage is found in the exchange board, remove it!**

## Active Auditing

- If auditing should be active, select Auditing in Security Settings:

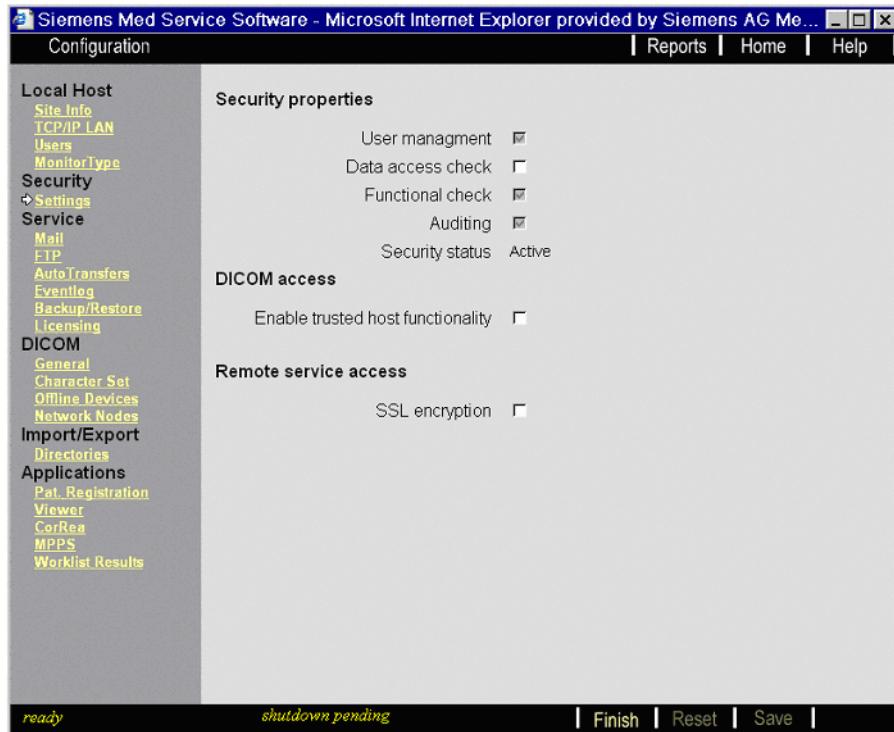


Fig. 22 Security settings

- If auditing should be active, call **Options >Configuration > Audit Trail** and setup the auditing either for storage
  - on network (computer where the audit trail should be stored must be defined in DICOM Nodes) or
  - on CD-R (from time to time the system may require a new CD-R in drive E:\ to save the audit trail).

For Audit Trail Settings, see Operator Manual SPB7-420.620.20....

### **CAUTION**

**Archiving of audit trail conflicts with Archiving & Networking / Image Manager Server.**

**When trying to archive the audit trail onto MOD or CD-R, the Image Manager and Archiving & Networking server are shutdown and restarted automatically. Pending jobs have to be restarted manually.**

**⚠ CAUTION**

The following actions are not reported to audit trail log:

- Change of time or NTP Time Server
- Changing host of an AET node
- Changing a DICOM Service of an AET Node
- Changing the settings of Print Devices
- Changing of Offline Devices
- Changing Directories
- Changing configuration of Audit Trail options

## Finishing configuration and rebooting system

1. In the Service Software window click Home and accept appearing message box to reboot the system with Ok.
2. Let the system reboot itself.
3. Login to syngo as administrator.

## Changing the AET Title

If the AE Title must be changed for Print in Fig. 8, the following steps have to be done:

1. Select under HOST the <Station/Computer name> in Fig. 10
2. Delete entry for “edit AET”, enter new AET.
3. Enter port 50104 and select “Storage”
4. Click “Add”.
5. Select AET title just entered and click “Save” in the action bar.
6. Change to DICOM General page.
7. Enter new AET in Print field of Fig. 8
8. Click “Save” in the action bar.
9. Finish configuration and reboot system.
10. In the SCR settings, change AET of SCR-system to new AET.

## Offline Devices



---

**When configuring a new Offline Device, make sure that the offline path is NOT a write-protected path.**

---

## Licensing



---

**Always check when time-limited licenses expire.**

---

## System Management



---

**Only System management MNP-Version VE10D should be used for MammoReport with syngo VD20N!**

---

## Changing the Keyboard Language

To change the keyboard language follow the steps below:

1. As user “Administrator” select Windows **Start Menu** ⇒ **Settings** ⇒ **Control Panel**.
2. In Control Panel double click **Regional and Language** icon.

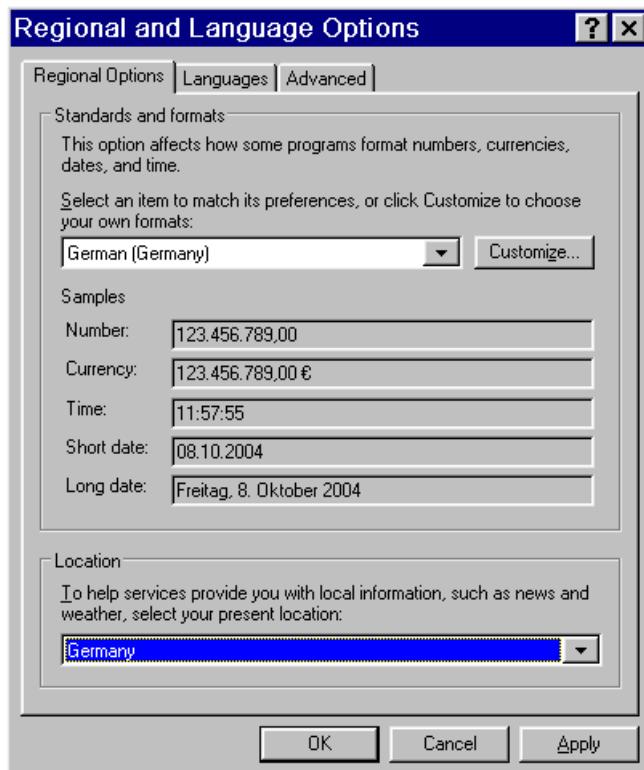


Fig. 23 Regional and Language options

3. Choose **format** and **location**. Click **Apply**.

4. Click on tab **Languages**. Click button **Details**.

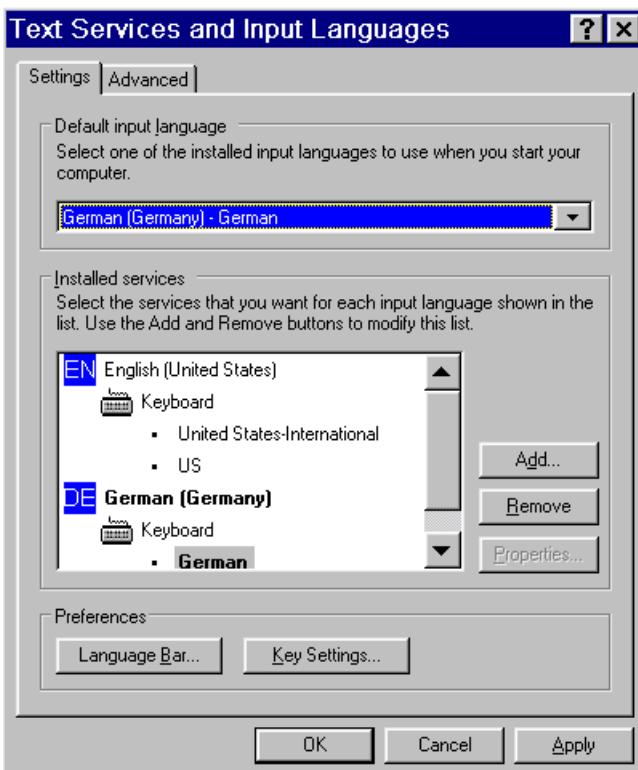


Fig. 24 Input language and Keyboard setting

5. Select **Default input language** and **installed services**. Click **OK**.  
 6. Restart the system.

**⚠ CAUTION**

---

After switching of languages a reboot needs to be performed. At the end of this reboot it is possible to use syngo for a few seconds without login until the login screen is appears. Wait for login screen to open!

---

## Calibration of monitors

Having done the syngo settings, a calibration of the high resolution monitors should be performed. This procedure is described in the document SPB7-420.820.20...“Calibration of Monitors - System manual”.

## Remote Service

To access the system from a remote computer, Remote Access must be configured via **Options > Remote Service**. For further information refer to document TD00.000.880.16 “Online Help - Remote Service”.

## General

In the SCR Service user interface four tabs are available:

- Licensing (entering software licenses)
- DICOM (configuring DICOM entities)
- Service Patients (viewing Service Patients and deleting patients from the MBC-SCR database)
- Info (displays information about software, e.g. version number)

To access the SCR Service user interface follow the steps below:

1. Log in to syngo.
2. Select **Options > SCR Service** in patient browser menu.
3. Enter password for service user.

## DICOM settings

The configuration of DICOM Settings is part of the configuration of the MammoReport<sup>Plus</sup> system at customer site.

**NOTE**

Only service users have access to DICOM settings.

When entering DICOM AET titles always use capital letters.

The DICOM tab in MammoReport<sup>Plus</sup> comprises two user interfaces for the DICOM settings:

- **Setup Tab**

The **Setup** tab provides entries to configure various DICOM entities like the MammoReport<sup>Plus</sup> workstation (SCR- system) itself and the connectivity to a DICOM Printer.

- **Printer Tab**

The **Printer** tab is used to configure various printer types with values for exactly one medium and matrix size.

## The Setup Tab

The **DICOM Setup** interface comprises three group boxes to configure the settings for various entities:

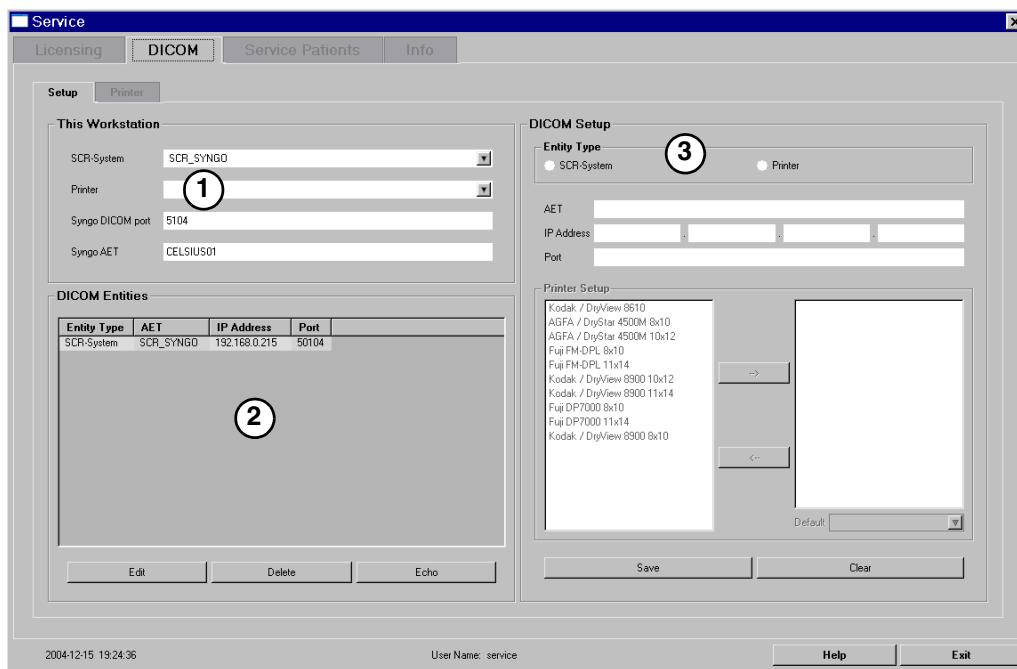


Fig. 1 The DICOM Setup tab.

1. **This Workstation** - displays all connected entities of this workstation (MammoReport<sup>Plus</sup> system and Printer).
2. **DICOM Entities** - displays in alphabetical order the connected entity types and provides tools for editing and deleting entities, and sending an echo to an entity.
3. **DICOM Setup** - contains entries to configure an entity type by AET, IP Address and Port. When adding a DICOM printer, all fields have to be filled out before a new entity can be saved and added to the list on the left hand side.

## The Printer tab

The **Printer** tab contains three group boxes:

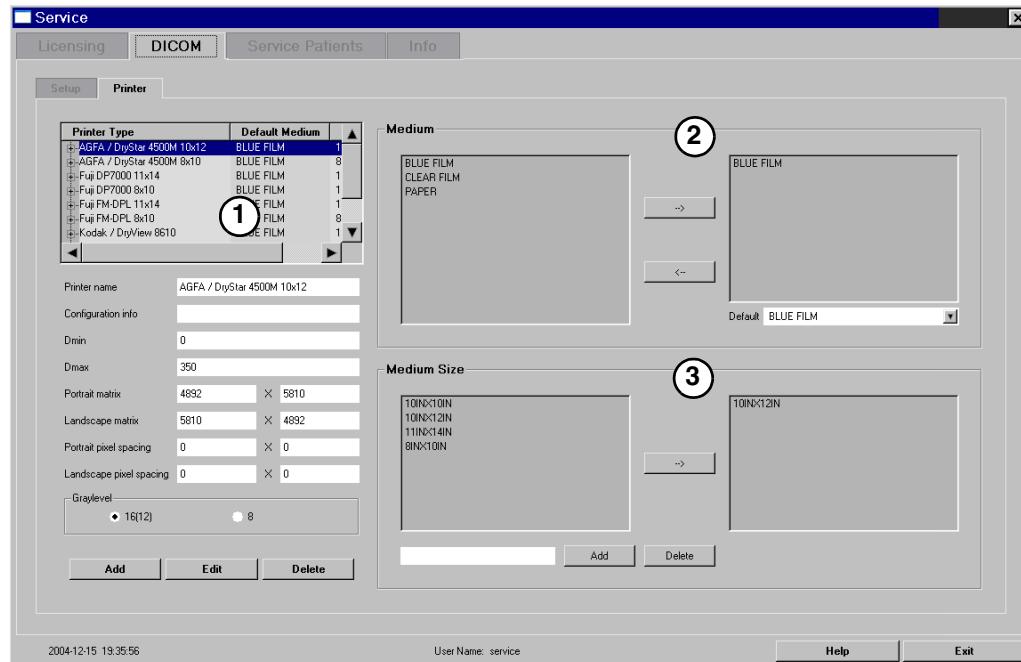


Fig. 2 The DICOM Printer tab

**NOTE**

To edit printer settings refer to "Editing a printer" on Page 7 - 9.

1. The **Printer** type box displays printers with Printer type, Default Medium and Medium Size.  
Below the list, text fields display information about a selected printer from the list. These entries can be used to edit existing values and to add a new type to the list above.  
The tool bar below contains three buttons to add, edit or delete a printer type.
2. The **Medium** box displays two lists.  
The list to the left list contains available mediums such as Paper, Blue Film or Clear Film. The list to the right is used to assign default mediums to the selected printer.  
Use the arrow buttons to assign (or remove) a medium to (from) a selected printer.
3. The **Medium Size** box displays two lists.  
The list to the left contains available medium sizes. The list to the right is used to assign exactly one medium size for the selected printer.  
Use the arrow button to assign a medium size to a selected printer. An existing value will always be replaced.  
There are two buttons to add new medium sizes and to delete medium sizes.

## Configuring DICOM Entities (MammoReport<sup>Plus</sup> system)

### Configuring MammoReport<sup>Plus</sup>

**NOTE**

The first AET to be added is the MammoReport<sup>Plus</sup> itself.

To add MammoReport<sup>Plus</sup> to the Entity Type list follow the steps below:

1. On **Setup** tab, DICOM Entities group box, select entity type SCR system in the Entity Type list.
2. Click **Edit** button.
3. In DICOM Setup group box, select **SCR system** radio button.
4. Fill out the text fields for **IP Address** as done in the syngo Service Software settings, step 4. Do not change other entries (except if the AET has been changed on syngo side, see "Changing the AET Title" on Page 6 - 21).
5. Click **Save** button.

Result: The entity is listed in **DICOM Entities** group, sorted by type.

**NOTICE**

If changes are made to SCR system, the changes are valid after reboot.

### Configuring a DICOM Printer

After initial installation the Setup Tab contains in the Printer Setup list various printers. Every printer type has exactly one medium size, i.e for every medium size the correct matrix size can be specified. Refer also to Tab. 1.

**NOTE**

The configuration of the DICOM Printer has to be linear density.

To add a DICOM Printer to the Entity Type list, follow the steps below:

1. On **Setup** tab, DICOM Setup group box, select radio button for **Entity Type** Printer.
2. Select one or more printers from the Printer Setup list using the right arrow button.
3. Select one of them as default printer.
4. Fill out the text fields for **AET**, **IP Address** and **Port**.
5. When all parameters are set, click **Save** button.

Result: The printer is listed in the **DICOM Entities** group, sorted by type.

6. When a radiologist selects the DICOM Print button in Reviewing, the configured DICOM Printer name is fully displayed in the DICOM print window and can be selected.

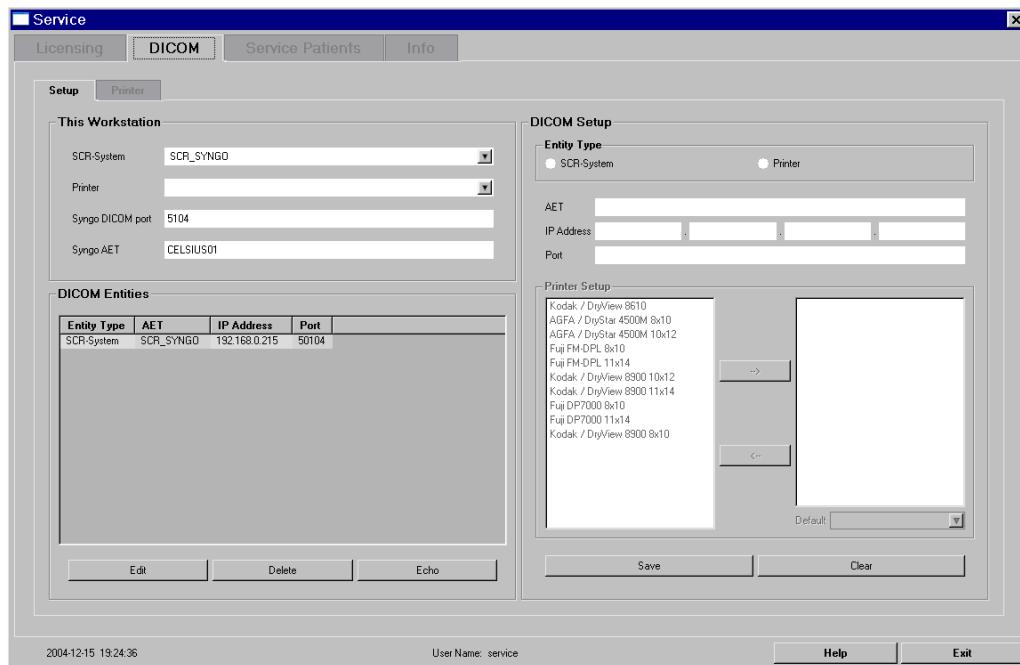


Fig. 3 Add entity type printer.

## Checking the Setup Configuration

**NOTE**

**It is absolutely necessary to run a test after configuration.**

To run a test after the configuration follow the steps below:

1. Select an **Entity Type** in the **DICOM Entities** group.
2. Click **Echo** button. The following message is displayed.



Fig. 4 .Echo successful message: SCR system/Printer

3. Repeat steps 1 and 2 for all entity types in the list.

**NOTE**

If echo is unsuccessful the possible causes could be:

- network settings do not work correctly.
- permission is denied.
- syngo has not been rebooted after the configuration completed in "Settings" on Page 6 - 1

Repeat configuration procedure or reboot syngo.

### Editing entities

To edit an entity follow the steps below:

1. On **Setup** tab, select an entity in the **DICOM Entities** list.
2. Click **Edit** button.
3. Make your changes in the group box **DICOM Setup**.
4. Click **Save** button.

**NOTE**

The Clear button clears all text fields for AET, IP Address and Port.

### Deleting entities

To delete an entity follow the steps below:

1. On **Setup** tab, select an entity in the **DICOM Entities** list.
2. Click **Delete** button.  
Result: A message box displays.



Fig. 5 Delete Message for DICOM entities like Printers

3. Click **OK**.  
Result: The entity is removed from the DICOM Entities list.

**NOTE**

The SCR Workstation cannot be deleted. At least one MammoReport<sup>Plus</sup> system must be registered.

## Modifying Printer

### Adding Printer Type

To add a new printer to the Printer list follow the steps below:

1. On **Printer** tab, enter printer name in the **Printer name** text field.
2. Enter **Configuration Info** (optional)
3. Enter the printer's **Dmax** value (refer to Tab. 1).
4. Enter desired size (in pixels) in **Portrait matrix** text fields. Width x Height. Refer to Tab. 1.
5. Enter desired size (in pixels) in **Landscape matrix** text fields. Width x Height. Refer to Tab. 1.
6. Select **Graylevel** radio button: 16 or 8. Refer to Tab. 1.
7. Click **Add** button.  
Result: The printer name is displayed in the Printer Type list.
8. Select a Medium from the Medium list.
9. Click right arrow button to assign the medium.  
Result: The selected Medium displays in the list to the right.
10. Repeat steps 2 and 3 to assign more mediums to the selected printer.
11. Select one Medium Size from the list.
12. Click right arrow button to assign the medium size. Only one medium size is possible.  
Result: The medium size is displayed in the list to the right as default medium size.

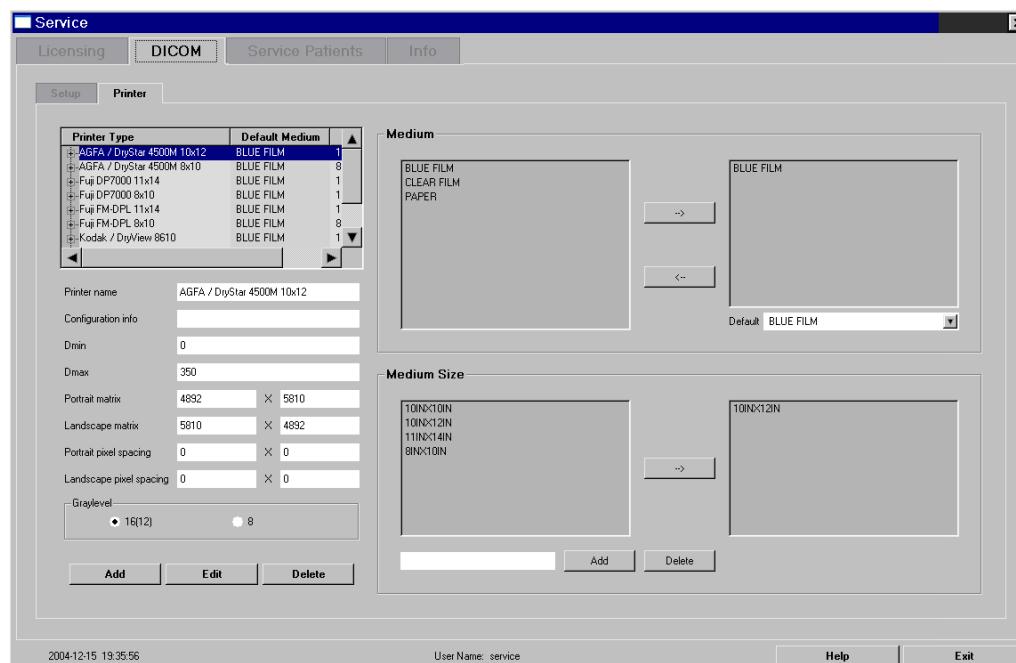


Fig. 6 Printer settings

**NOTE**

**To use another medium size, add a new printer type, and name it according to medium size.**

<b>Default Values</b>						
<b>Printer</b>	<b>Dmin</b>	<b>Dmax</b>	<b>Matrix</b>	<b>Portrait</b>	<b>Landscape</b>	<b>Graylevel</b>
AGFA Drystar 4500M	0	350	8 x10	3828 x 4958	4958 x 3828	16
AGFA Drystar 4500M	0	350	10 x12	4892 x 5810	5810 x 4892	16
Fuji DP 7000	0	300	8 x10	3907 x 4819	4931 x 3795	16
Fuji DP 7000	0	300	11 x14	5075 x 7043	7199 x 4919	16
Fuji FM-DPL(50mu)	0	300	8 x10	3904 x 4819	4929 x 3795	16
Fuji FM-DPL(50mu)	0	300	11 x14	5000 x7000	7120 x 4880	16
Kodak DryView 8610	0	350	10 x12	5024 x 6200	6200 x 5024	16
Kodak DryView 8900	0	350	8 x10	5056 x 6368	6368 x 5056	16
Kodak DryView 8900	0	350	10 x12	6368 x 7656	7656 x 6368	16
Kodak DryView 8900	0	350	11 x14	7028 x 8976	8976 x 7028	16

Tab. 1 Printer settings

**NOTE**

**For all available printers (Kodak, Fuji and Agfa), the “BLUE FILM” medium is selected.**

**NOTE**

**If the error message “Print failed: ImageBox\_N\_Set FAILED” is displayed, you may select only one monitor for printing.**

**NOTE**

**Only Fuji Printer with Print Server can handle subnets. If a Fuji Printer without Print server is used, no subnet must be present.**

## Viewing Printer Settings

To view printer medium settings, follow the steps below:

1. In **Printer** tab select printer in the Printer list.
2. Click the plus sign in front of the printer name.  
Result: The Printer Type folder expands.

Printer Type	Default Medium	
AGFA / DryStar 4500M 10x12	BLUE FILM	1
└ Film	└ BLUE FILM	
AGFA / DryStar 4500M 8x10	BLUE FILM	8
└ Film	└ BLUE FILM	
+ Fuji DP7000 11x14	BLUE FILM	1

Fig. 7 DICOM printer medium settings.

## Editing a printer

A selected printer is highlighted in **Printer Type** list, and its corresponding values are displayed in the text fields below the list, see Fig. 6.

To edit a printer follow the steps below:

1. In **Printer** tab, select a printer in the **Printer Type** list.
2. Make your changes in the text fields (e.g. change the Dmax value) and /or in the medium and Medium Size list.
3. Click **Edit** button to assign new settings to the selected printer.

**NOTE**

**Changes to medium and medium size are immediately assigned to the selected printer.**

### Deleting a printer

To delete a printer, follow the steps below:

1. In **Printer** tab, select a printer in the **Printer Type** list.
2. Click **Delete** button.  
Result: A message displays.

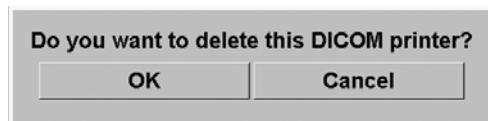


Fig. 8 Message box

3. Click **OK**.  
Result: The printer will be removed from the Printer Type list.
4. If you try to delete a type from the printer type list that is configured as DICOM printer, the following message box displays.



Fig. 9 Message box if Printer Type is used as DICOM printer

### Adding/Deleting Medium Sizes

Below the Medium size box a text field is used to fill in new medium sizes. The Add and Delete button are located beside it.

To add a new medium size or to delete a medium size, follow the steps below:

1. Fill in size values into the text field. Click **Add** button.  
Result: The new medium size is displayed in the **Medium Size** box.
2. Select medium size in the **Medium Size** box.  
Click the **Delete** button.  
Result: The medium size is removed from the **Medium Size** box.

## Licensing

The Softcopy Reading System (SCR) software is protected by a dongle connected to the parallel port of the PC. In order to use the SCR software, at least the main license is needed:

- Main license (Feature: **MBC-SCR-1**)
- CAD license (Feature: **MBC-CAD**, optional)
- BI-RADS license (Feature: **MBC-BIRADS**, optional)
- Read State Synchronization license (Feature: **MBC-SYNC**, optional)

To enter Licensing settings follow the steps below:

1. Select **Licensing** tab. The Licensing Window is displayed.
2. Enter feature, e.g. MBC-SCR-1 into the field **Feature**.
3. Enter 3.0 into the field **Generation**.
4. Enter license number into the field **License**.
5. Click **Check**. If the entered values are correct, a new entry appears in the licenses list.

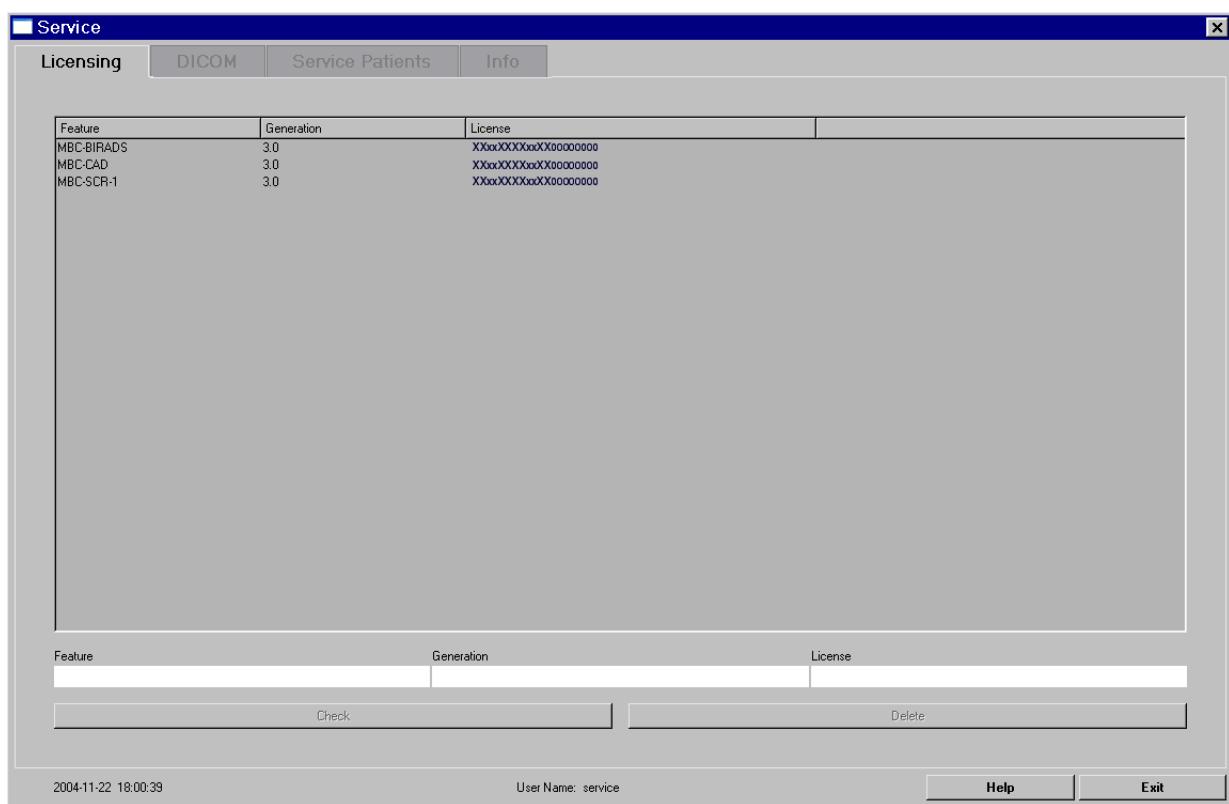


Fig. 10 User Interface for the License Management.

## Service Patients

In the Service Patients user interface two functionalities can be accessed:

- High-resolution viewing of service patients (needed for calibration of monitors, described in document Quality Control Manual SPB7-420.621.20.01 ...)
- Deletion of patients from the MBC-SCR database (needed for database maintenance, described in document Maintenance Plan SPB7-420.664.20...)

**NOTE**

**Deletion of a patient from the MBC database is only possible if the patient has status “Read” on SCR side as well as on syngo side.**

On selecting the **Service Patients** Tab, the service patient list is displayed.

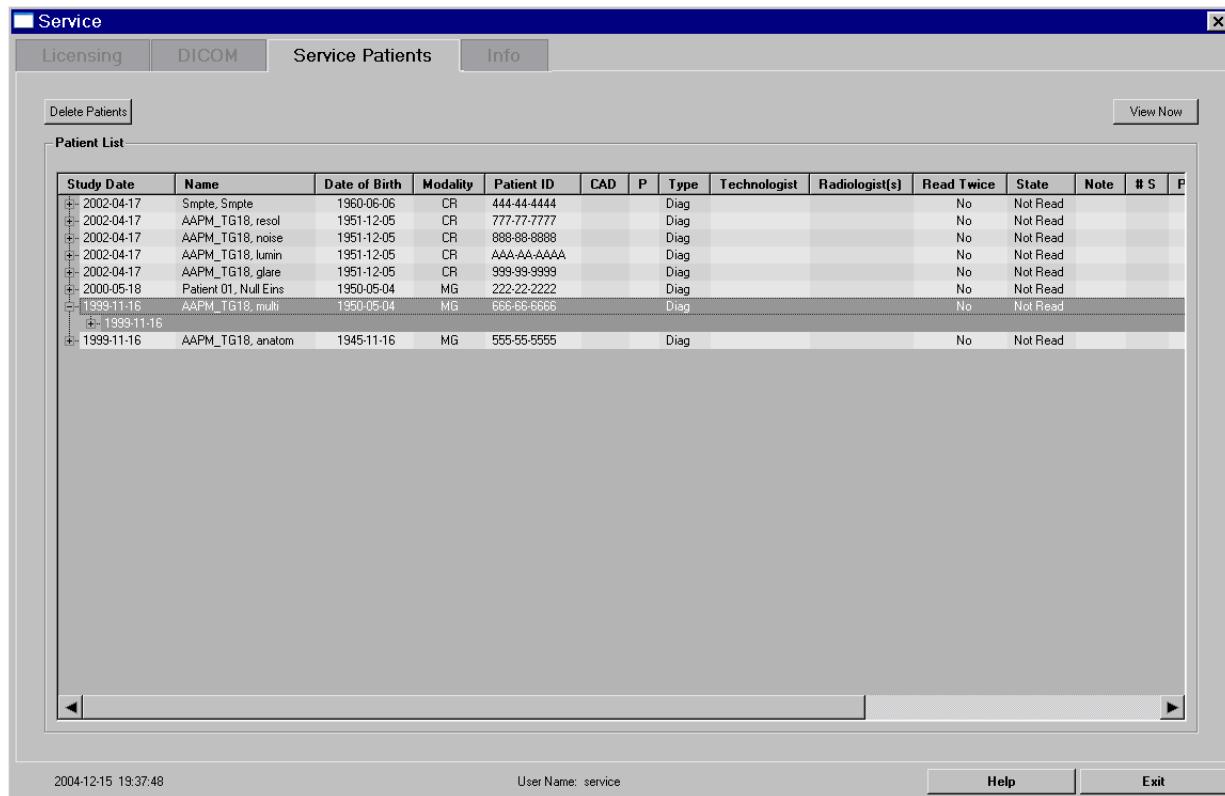


Fig. 11 Service patients user interface

A patient can be viewed as follows:

1. Select patient in the list by clicking the left mouse button.
2. Click **View Now** (the patient is displayed in the High-Resolution Viewer).

**NOTE**

**If the Original TG18 Test Images are to be used, they can be downloaded from the Internet. The modality type “OT” has to be configured to forward them to SCR\_SYNGO (see "Routing of modalities from syngo to SCR" on Page 5 - 18).**

On clicking **Delete Patients** the corresponding dialog will be opened. The patients to be deleted can be selected in the list.

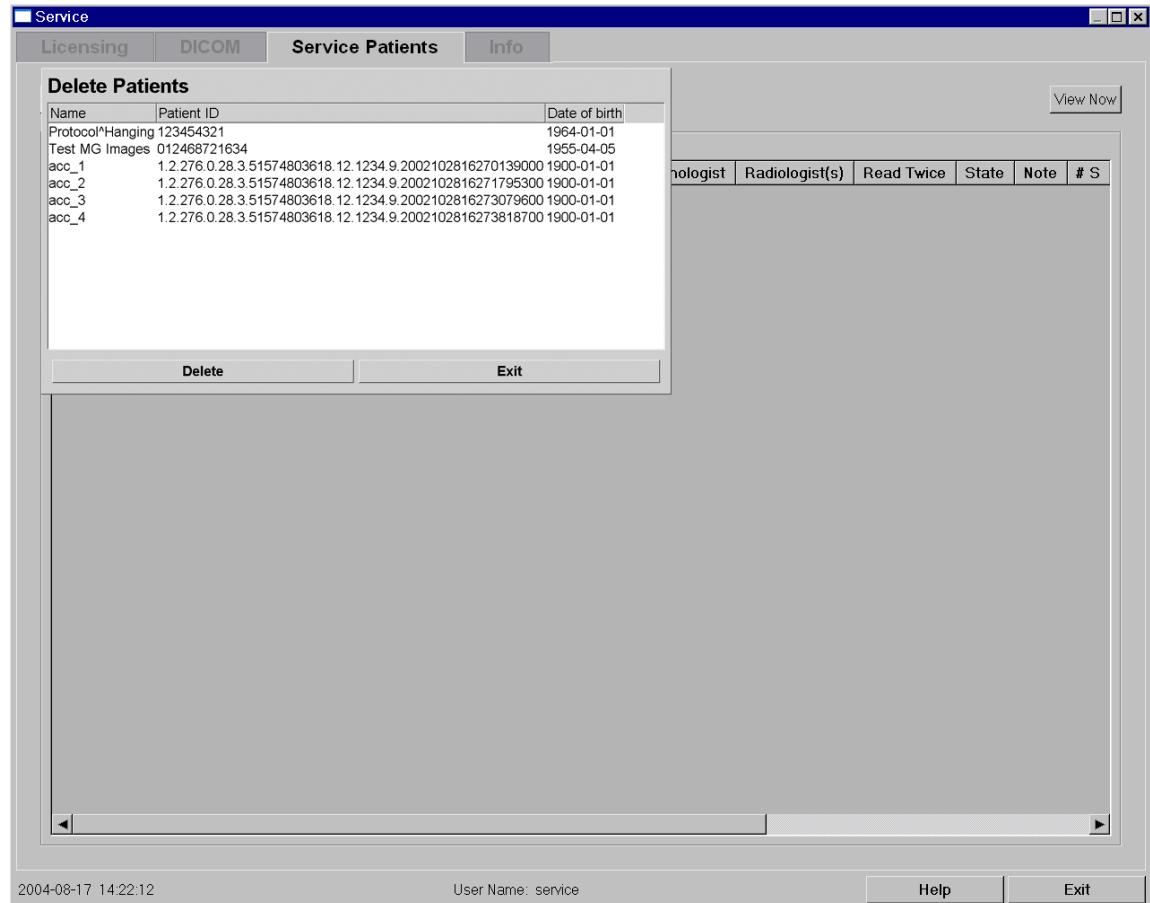


Fig. 12 Delete Patients user interface

**NOTE**

After deleting patients the system must be restarted!

**Info**

On selecting the Info tab, software version and copyright info are displayed.



Fig. 13 Info window

## General

Before using the MammoReport<sup>Plus</sup> system for the first time it is recommended to customize the system settings together with a responsible administrator or radiologist. For further information regarding system settings, refer to document SPB7-420.620.20 ... "Operator Manual".

## System Settings

The Administration module (accessible via Options > SCR Administration) contains a **Setting** tab to configure a special environment for all users when working with the MammoReport<sup>Plus</sup> system. The settings are performed for the Administration and Reviewing mode for all radiologists.

1. Click the **Settings** tab to open the interface.

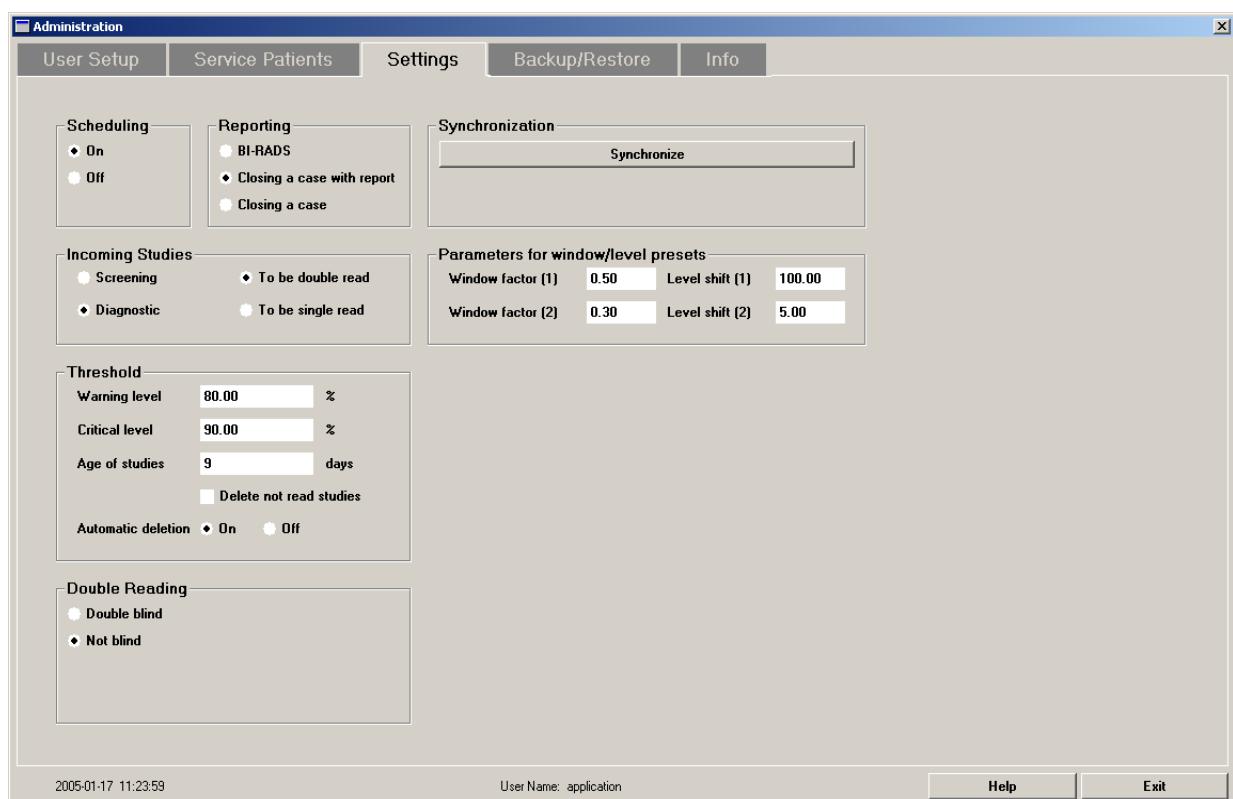


Fig. 1 Setting Tab in Administration

2. Select the radio buttons to configure the system to the customer's needs.

**NOTICE**

Only an Administrator can change the configuration for scheduling, report and watermark levels in general.

**WARNING**

The Report configuration can only be changed by generating a new database!

**NOTICE**

If Report Settings “BI-RADS” or “Closing a Case with reporting” is set, a paper printer driver needs to be installed to be able to print the reports. For this purpose reboot the system with shift key and install the printer driver as OS user “administrator”.

Settings	Selection	Description	Module
<b>Scheduling</b>	On	Direct access to cases in the MammoBrowser	Mammo- Browser (patient list)
	Off	Direct access to Mammo- Browser and planning of ses- sions	
<b>Report</b>	BI-RADS reporting	HTML reports are automati- cally generated containing all diagnostic data	High-Resolu- tion Viewer (last step of workflow)
	Closing a Case with reporting		
	Closing a Case	No final report is generated	
<b><i>Warning: The Report configuration can only be changed by generating a new data- base.</i></b>			
<b>Incoming Studies (Type settings)</b>	Screening*	All incoming cases will be of type Screening	MammoBrowser (patient list)
	Diagnostic Mode*	All incoming cases will be of type Diagnostic	
<b>Incoming Studies (Read twice set- tings)</b>	To be double read*	All incoming cases will be of type Double Read	
	To be single read*	All incoming cases will be of type Single Read	
<i>* These settings can always be changed individually by radiologists in the MammoBrowser</i>			
<b>Threshold</b>	Warning Level	Avoiding storage space over- flow	Mammo- Browser and High-Resolu- tion Viewer
	Critical Level		
	Age of studies		
	Delete not read studies		

Tab. 1 Customized System Settings

<b>Automatic Deletion</b>	On	Images are deleted following certain criteria. No warning messages are displayed as long as the Automatic Deletion is continuously working.	Mammo-Browser and High-Resolution Viewer
	Off	No automatic deletion. Warning Level and Critical Level messages are displayed.	
<b>Double Reading</b>	Double blind	Only the 1st Reader is notified about the existence of his (her) markings and can view them	MammoBrowser
	Not blind	All users are notified about the existence of markings and can view them.	
<b>Synchronize</b>		Manual synchronization of read states with other workstation(s)	MammoBrowser
<b>Predefined Window/Level Values</b>	Window Factor(1) Level Shift (1)	Parameters for Window/Level settings can be predefined.	High-Resolution Viewer
	Window Factor(2) Level Shift (2)		

Tab. 1 Customized System Settings

## Automatic Deletion

A service user can set the MammoReport<sup>Plus</sup> system configuration by default to automatic deletion of images to avoid storage space overflow. This mode matches the task of the Case Administrator user, but detects the system storage space and deletes images automatically following certain criteria.

- **Automatic Deletion Off**

- When the MammoReport<sup>Plus</sup> system detects the Warning Level, a warning message is displayed.
- When the MammoReport<sup>Plus</sup> system detects the Critical Level, a warning message is displayed, and the system does not accept DICOM images, until the Case Administrator frees up sufficient disk space by deleting images.

See also "Preventing Hard Disk Overflow" on Page 8 - 5.

- **Automatic Deletion On**

- A site can set the Warning Level for storage space as low as possible => 1%. Then the only criteria for deletion will be the age of the study.
- When the MammoReport<sup>Plus</sup> system detects the Warning Level, images are deleted following certain criteria. The system displays **no warning messages** as long as the Automatic Deletion is continuously working.
- When the MammoReport<sup>Plus</sup> system detects the Warning or Critical Level, the corresponding warning messages are displayed.

### Criteria for Automatic Deletion

The criteria for automatic deletion apply to the most current study of a patient.

If the criteria for automatic deletion are fulfilled - status in the MammoBrowser is Read (2x Differ or 2x Equal), and the date of the current study is X days ago - the complete patient comprising all images and CAD SRs of all available studies is deleted, so that the patient disappears from both the syngo Patient List and the MammoBrowser.

If disks are filled according the Warning Level a warning displays, and automatic deletion starts.

- Warning Level - 50% (default).  
If hard disk is 50%full, the automatic deletion starts.
- Critical Level - 90% (default/recommended is 95%).  
If hard disk is filled 90%, the system will not accept further images.
- Age of Studies - X days  
The patient will be automatically deleted X days after the last image of the most current study of the patient has arrived on the SCR system.

**NOTE**

**This process will be initialized only when no user is logged in.**

**Do not lock the computer, because no automatic deletion will take place.**

### Delete “not read” studies

- If this checkbox is checked automatic deletion is done independently of the “Read” state (i.e. “Read” and “Not Read” patients are deleted).
- If this checkbox is not checked, automatic deletion is done only on “Read” cases (“Read”, “2x differ” or “2x equal”).

The system checks regularly for each patient in the MammoBrowser when the corresponding DICOM images and CAD SRs of the most current study have arrived. If all images and CAD SRs are stored longer than X days, the system deletes all DICOM images, all CAD SRs, and all prepared images. The patient disappears then from both the syngo Patient Browser and the MammoBrowser.

### Criteria to prevent patients from automatic deletion:

- - Images of the patient are scheduled in a session
- - The patient is locked (only available in Reporting: Closing a Case)
- - the patient has the attribute **No automatic deletion**

### How to set the attribute No automatic deletion

1. Right click on patient in the MammoBrowser to open a setting window.
2. Click into check box **No automatic deletion** to protect case against automatic deletion.
3. Click **OK** to confirm.

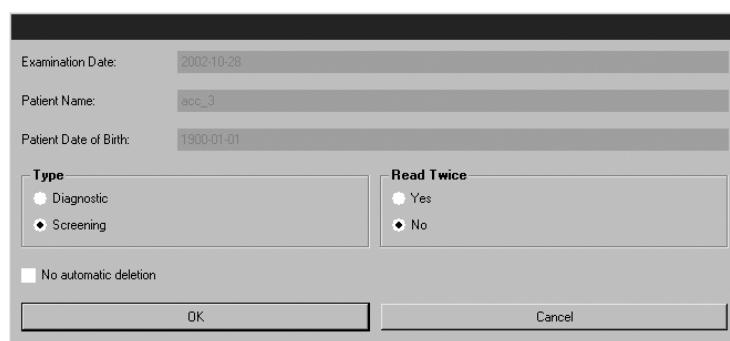


Fig. 2 Window to select No automatic deletion of a case

## Consequences of Automatic Deletion

- The original DICOM images and prepared images (tiff images) of read cases that fulfill the criteria above will be deleted.
- The corresponding patients disappear from the MammoBrowser, but the diagnostic data (marking, annotations, etc.) are kept safe in the database.
- If it is necessary to access the diagnostic data and optionally the html report of such a deleted patient, the images of this patient need to be re-sent from the PACS or AWS.

## Preventing Hard Disk Overflow

This functionality is part of the Settings tab. The Threshold is a mechanism to avoid storage space overflow. Such a storage space overflow leads to system instability.

- The threshold functionality provides two message levels, that are displayed to all users independent of their special rights.

### NOTICE

**The threshold functionality is performed automatically and cannot be manipulated in any way by any users.**

A service user can set different configurations to avoid storage overflow:

- Set the system to Automatic Deletion (of images) On/Off
- Configure the warning level (range from 50% up to 85%) - by default the warning level is set to 80%

### WARNING

**If Automatic Deletion setting is Off, the Case Administrator has to delete images/reports of patients when they have been read. This has to be done on a regular basis to ensure that enough disk space is available.**

- Configure the critical level (range from 80% up to 95% - by default the critical level is set to 90%).

### NOTICE

**The critical level has to be higher than the warning level. Do not enter values like 0 or negative values.**

### Warning Level

The user is informed by a warning message when there is less than a certain amount of storage space left, and the Case Administrator user can delete data before the critical level is reached.

The system checks the database regularly (every minute) to inform the user about the available disk space, when a certain disk filling percentage is exceeded.

If the warning level has been detected and a warning message pops up, a follow-up message is displayed every 20 minutes. Whenever switching between user interfaces (Reviewing, Administration) the message is displayed again. An administrator could take appropriate measures within this sufficient time frame, whereas the checking itself is continuously done every minute.

**NOTICE**

**The warning messages are only displayed when a user is logged into the system.**

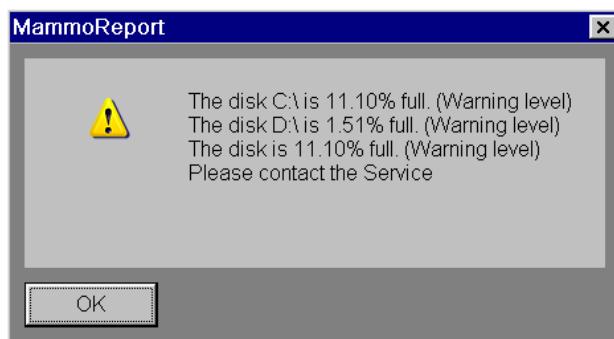


Fig. 3 Warning Level message

### Critical Level

The system does not accept DICOM images any more when the critical amount of storage space is reached. This is to avoid a storage space overflow.

If the critical level has been detected the following message informs the user:

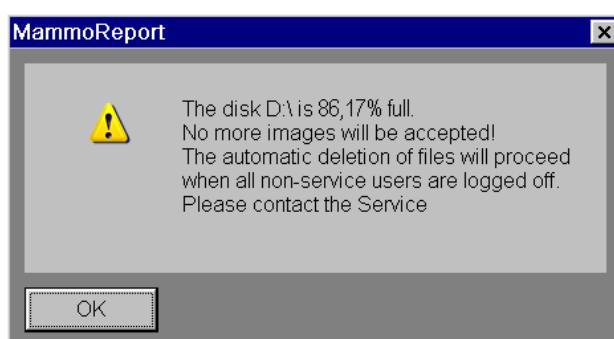


Fig. 4 Critical Level message

## Read State Synchronization

Clicking the Synchronization button starts an overall synchronization with other configured system(s). The time for automatic overall synchronization and the IP Addresses of the sync receivers are to be configured in SyncConfiguration.ini (see also "Read State Synchronization" on Page 5 - 16).

If the synchronization fails (e.g. because the other workplace is down or disconnected from network), a message at the sync sender informs the user.

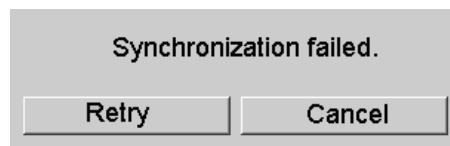


Fig. 5 Synchronization error message

If the user selects **Cancel**, then the overall synchronization will take this failed patient into account and try a synchronization at the next configured synchronization time. If **Retry** is clicked, the sync process is started again.

This page intentionally left blank.

## General

A backup of system specific data, such as customer configuration entries, network nodes and AETs is mandatory after software updates or system adjustment steps.

### CAUTION

If subsequent changes (e.g. in the configuration) are made, the corresponding backup package must be saved again.

### NOTE

Information how to re-install the software can be found in document *Installation of Software VB10 (SPB7-420.812.21...)*.

## Save Customized Settings

After setting all configurations successfully, an image backup of the system disk is created on a CD-R. With a disk image, the start-up status can be restored ensuring continued system functionality.

Since the high-resolution monitors are unable to display VGA graphics, the instructions in this chapter are monitored on the syngo monitor.

## Step 1: Preparing the System for Recovery CD Creation

1. Make sure that no or only a few patients are available in the Patient Browser.
2. If there are many patients, delete them in the Patient Browser first, then log out from the system for at least 1 minute.
3. Login again and check that the Patient Browser is empty.
4. Select in the menu **Options - End Session**. In the **End Session** dialog select **Shutdown**.
5. Turn on the computer again and hold the **Shift key** pressed to log in as OS administrator.
6. Check the size of the **IMAGE** directory on F: and the **SCRData** directory on F: (G: if the system contains an optional hard disk).
7. Make sure that there is enough hard disk space on C: for the data from F: (and G: if the system contains an optional hard disk).

- for System type **Basic** (without optional disk), run batch  
C:\MBCSCR\SQLScripts\Prepare4Recovery\_basic.bat
- for System type **Option** (with optional disk G:\), run batch  
C:\MBCSCR\SQLScripts\Prepare4Recovery\_option.bat

8. The batch stops after copying the syngo Image directory to C:
9. Check that no error is displayed. Press any key.
10. The batch stops before copying the **SCRData** directory to C:
11. When there is enough space on C:, press any key to continue.

12. The batch stops right after the message ***batch is finished*** displays.
13. Press any key to close the DOS box.
14. Check that there is a shared ***Image*** directory on C:
15. Starting Ghost:
  - Insert the Ghost 2003 floppy into the floppy drive or
  - Insert the Installation DVD into the DVD drive D:
16. Press windows key and select **Shutdown** to shutdown the computer.
17. Turn on the computer and enter BIOS with **F2**. Enter the right BIOS password.
18. Enable booting (depends on step 15):
  - from floppy or
  - from DVD
19. Leave BIOS setup with **F10** (save and exit).

## Step 2: Running Ghost

1. syngo monitor shows ***Starting PC DOS...***
2. Wait until the following menu appears:
 

1 - Backup system drive  
   2 - use GHOST interactive  
   E - Exit  
   Your choice [1,2,E]?
3. Type **2** on the keyboard.
4. Wait until ***About Norton Ghost*** screen appears.
5. Click **OK**.
6. Select in the next menu **Local - Disk - To Image**.
7. Select Drive 1 in the **Select local source drive...** dialog.
8. Click **OK**.
9. In the next dialog ***File name to copy image to***, select in **Look in:** the **PLEXTOR** drive.
10. Click beside the **File name: CDR00001.GHO** the **Save** button.
11. In the dialog ***Compress image file?*** select **High**.
12. In the dialog ***Copy a bootable floppy to the CD/DVD disk?***

• **Select Yes, if using the floppy disk**  
 In the next dialog **Is the floppy disk ready in drive a:?** select **Yes**.

The status bar shows that the floppy is read in.

• **Select No, if using the DVD.** No dialogs will appear.

13. A question appears **Proceed with Drive Backup to CD/DVD? About <no1> CDs or <no2> DVDs will be needed.**

**NOTE**

You will not need so many CDs as given in the dialog, about 3-4 CDs will be necessary.

14. Select **Yes**.

**⚠️WARNING**

**Spanned NTFS images on removable media may result in excessive media swaps if used with Ghost Explorer - continue? appears. Select Yes.**

15. The progress indicator starts.
16. When system asks for next CD, remove the already finished CD and insert the next blank CD.
17. When recovery CD creation is finished, click **Continue** and quit Ghost.
18. Label the CDs with **Recovery CD/computer name /date /and CD number x of y**.

## Step 3: Prepare the System after Recovery CD Creation

1. Run one of the following batches:

- for System type **Basic** (without optional disk), run batch C:\MBCSCR\SQLScripts\PostRecovery\_basic.bat
- for System type **Option** (with optional disk G:\), run batch C:\MBCSCR\SQLScripts\PostRecovery\_option.bat

2. Press any key when required.
3. The DOS window disappears when the batch is finished.
4. Restart the computer and enter BIOS with **F2**.
5. Enter the right BIOS password, and disable booting from floppy drive.
6. Leave BIOS with **F10** (save and exit).
7. System is re-booted, and the login window displays.

## Restore Recovery CD

### Step 1: Preparing the System for Restore of Recovery CD

1. Turn on the computer and enter BIOS with **F2**. Enter the right BIOS password.
2. Enable booting from CD ROM.
3. Leave BIOS setup with **F10** (save and exit).

## Step 2: Running Ghost

1. Insert **CD 1 of y** into the DVD-ROM drive (the top one) and boot the computer directly from CD.
2. A **boot menu** appears on the screen.  
The menu consists of two steps:  
Microsoft Windows 98 Start menu  
1. ... System drive  
2. Use Ghost interactive
3. Choose **2: Use Ghost interactive**
4. Click on to **Continue without marking drives** if this question is shown.
5. In **About** select **OK**.
6. Select in menu Local ⇒ Disk ⇒ **From image**.
7. In **Image file name to restore from** select **Look in:** drive R [...] CD ROM drive
8. Select file **\*1.GHO**.
9. In **Select local destination...:** choose **Drive 1** and confirm with **OK**.
10. In **Destination drive details** click **OK**.
11. Confirm question **Proceed with disk restore...** with **Yes**. Installation of image begins. **Progress indicator is running**.
12. Insert new CD when required until message appears: **Clone complete...** ⇒ click **Reset Computer**.
13. During restart **remove CD** from DVD drive and press **Shift key** while booting to login as OS user administrator.
14. Check that drive assignments are correct, and data disk(s) are available and empty:
  - DVD-drive D:
  - CD-writer E:
  - MED\_DATA F:
  - if applicable SCR\_DATA G:
  - You may need to import foreign disk F: and if applicable G:
15. Run one of the following batches:
  - for System type **Basic** (without optional disk), run batch C:\MBCSCR\SQLScripts\PostRecovery\_basic.bat
  - for System type **Option** (with optional disk G:\), run batch C:\MBCSCR\SQLScripts\PostRecovery\_option.bat
16. Press any key when required.
17. The DOS window disappears when the batch is finished.
18. Shutdown the computer.

## Step 3: Prepare the System after Restore of Recovery CD

1. Enter the right BIOS password, and disable booting from floppy drive.
2. Leave BIOS with **F10** (save and exit).
3. System is re-booted, and the login window displays.

This page intentionally left blank.

## Backup and Restore of the MBC Database

The **SCR Administration** Tab provides a backup and restore functionality for the database including user data, user preferences, patient data, markings, annotations, and diagnosis. Users with administrator rights have access to these functionalities.

### NOTE

This functionality is only valid for the SCR part.

Backups can be saved manually on CD. This can be done only by a Service user. Detailed information is described in the Technical Manual.

### NOTE

It is recommended that database backups be done on a regular basis in order to ensure that no data is lost in the event of system failure.

### Creating a Backup

1. Click on **Backup/Restore** in the Administration window.
2. The corresponding tab card opens.
3. Click **Backup**.
4. When a backup is finished the message **Backup completed** is displayed.

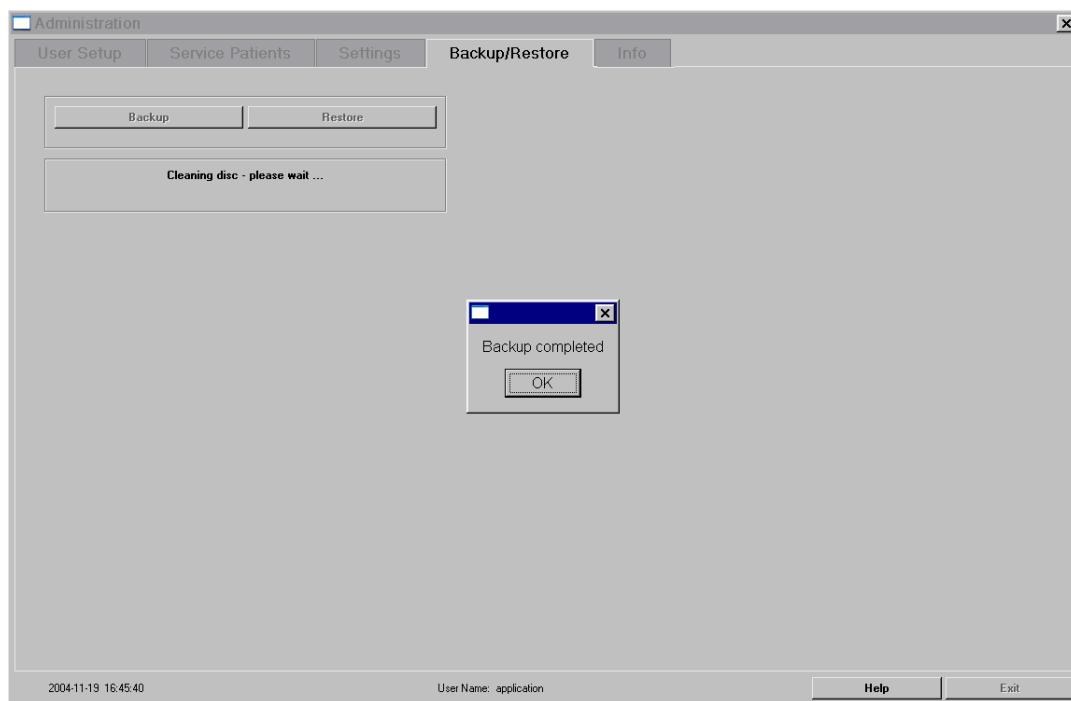


Fig. 1 Backup/Restore menu

### NOTE

During a backup process no other functions are available.

If a backup is done for the very first time after installation, the following error message appears:

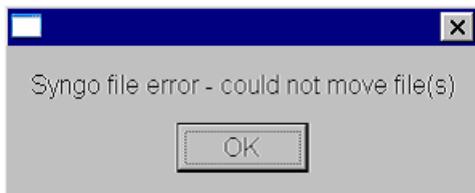


Fig. 2 Error message on very first backup after installation

If the backup is retried, a DOS box pops up for a short time and the backup is successfully done.

### Restoring a backup

With **Restore** the database can be restored.

1. Click **Restore**.
2. The message **Collecting files, please wait ...** displays.
3. A new window opens containing all available backups with the current one at top of the list.
4. Select the backup you want to restore.

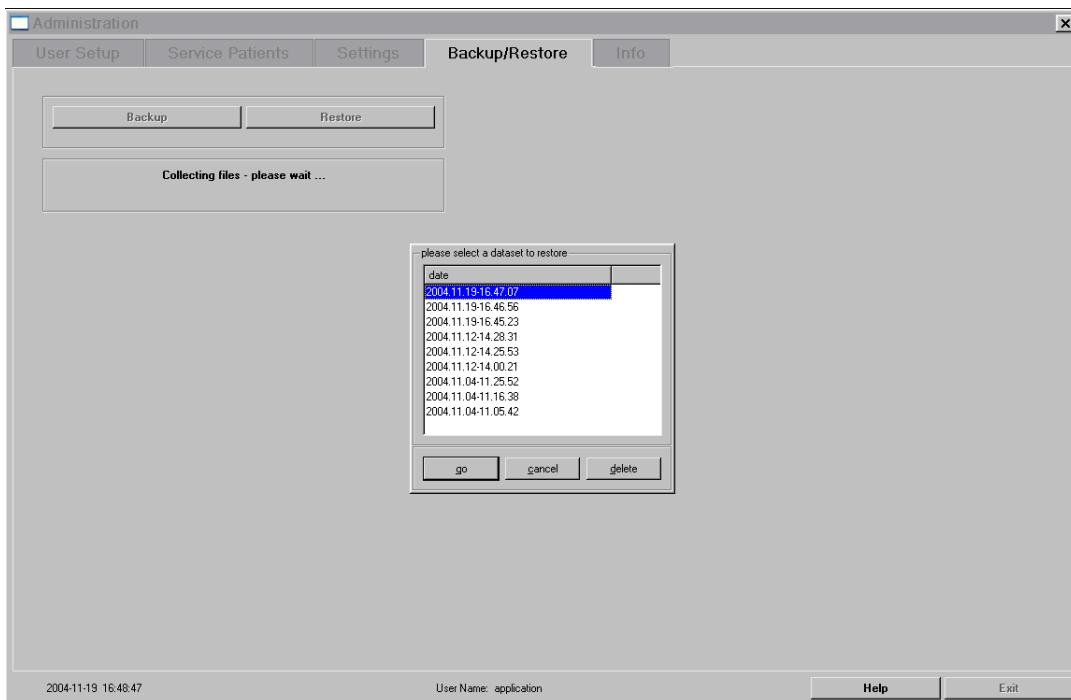


Fig. 3 Restoring the database

5. Click **Go** to start the restore process

#### NOTICE

---

**During a restore process no other functions are available, and you have to restart the system afterwards.**

---

**NOTE**

To reduce the content of this list, you may delete backups that are not needed anymore.

## Backup/Restore on syngo level

Furthermore, syngo provides the possibility for Backup/Restore of various settings (MRI Customer, SCR, Security Settings, SW Settings 02).

This should be done as Local Service in the Service Software menu (see syngo-service document “Online Help - Backup and Restore” TD-00.000.880.10). For a backup, four CD-ROMS are needed, one for each setting.

This page intentionally left blank.

Chapter	Page	Changes
	0-2	Add Coronis and MediCal Pro
1	1-1	Add Coronis and MediCal Pro, added Siemens to Monitor tools
2	2-3	Add TFT, MFGD 5621HD to table
3	3-1	changed note
5	5-1 ff.	re-write content up to page 5-5
5	5-10	add content to description "Changing the Keyboard Driver"
6	6-4, 6-5	add content to point 1
6	6-10	re-write description of point 7, add note
6	6-13	add point 1-3, changed AE title and name
6	6-14	re-write description
6	6-23	complete headline
8	8-4	Add Note
9		Add new chapter recovery CD

This page intentionally left blank.

## Trouble Shooting for Languages

For keyboards and the corresponding drivers

- Swedish
- Portuguese
- Italian

some syngo dialogs show not the correct fonts (refer to Fig. 1.).

The End Session dialog shows fonts that are too small, and in the login dialog the first letter from "Domain" is not completely visible.

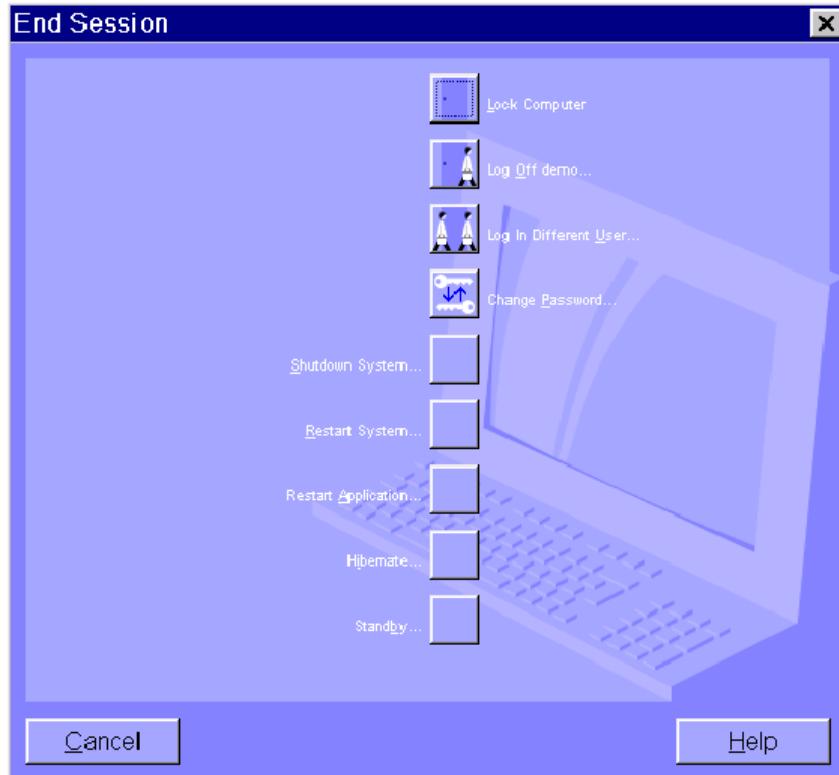


Fig. 1 End Session Dialog

## Corrective Measures

These dialog layouts can be corrected by entering font sizes for these keyboard layouts into the registry manually as described in the following.

1. Restart the system with shift key pressed
2. Login to OS as administrator
3. Select Start - Run...
4. Enter regedit and press return.
5. Select menu Edit - Find.
6. Enter LOGFONT and click OK.
7. In /HKEY\_LOCAL\_MACHINE\SOFTWARE\Siemens\MedCom\Config\Site\Global\ LOGFONT is found.

8. Select the C1.



Fig. 2 Swedish Logfont

9. Create a new string value with a right mouse click into the right window and select New from the context menu.
10. Select string value from the next context menu.
  - a) for Swedish keyboard layout, enter "V14.SV" (as shown in Fig. 2).
  - b) for Portuguese keyboard layout, enter "V14.PT".
  - c) for Italian keyboard layout, enter "V14.IT"
11. Complete the definition with enter.
12. Double click onto the new entry V14.\*\* and define as value "MMincho for Siemens", as shown in Fig. 2.
13. Repeat steps 8-12 as well for
  - LOGFONT\_2
  - LOGFONT\_3
  - LOGFONT\_4
  - LOGFONT\_5
14. Close registry editor and reboot the system.
15. Check that login dialog and End Session dialog show correct fonts in the proper size.